

NEW WORLDS SCIENCE FICTION

No. 58

VOLUME 20

2/-



WHITE ★ BRUNNER ★ ALDISS ★ BULMER

NEW WORLDS

— PROFILES —

DAN MORGAN



JOHN KIPPAX

Authors John Kippax and Dan Morgan have long been friends, having appeared together in the same dance band for many years. They are now continuing that friendship within the pages of *New Worlds* where John Kippax first appeared in 1954 with a collaborated story with Dan Morgan, who had made his debut two years earlier (see No. 39).

John Kippax is an English master at a grammar school, finding time to write at least one thousand words a day despite the inroads on his mental health by small boys. Since his first appearance in *New Worlds* he has written a large number of stories and been published by magazines as widely differing as the children's *Young Elizabethan* and the dance music weekly *Melody Maker*. His first non-fantasy short story was published in 1954 in Putnam's *Pick Of Today's Short Stories*.

Readers will have noticed that most of his stories appear in *Science Fantasy*, and this is due, he says, "to the fact that I began to write science fiction almost as soon as I started to read it; a disability from which I never expect to completely recover, despite my voracious reading habits."

"I believe in the 'think piece' method of working out a story," he continues, "which is to put a bare notion at the top of the page and pound the typewriter for as many thousand words as it takes for the story idea to emerge. This system does not often fail."

He believes that Arthur Clarke and John Christopher write as good science fiction as any of the Americans, and, in addition, are better quality writers.

NEW WORLDS SCIENCE FICTION

VOLUME 20

No. 58

MONTHLY

APRIL 1957

CONTENTS

<i>Short Stories :</i>	
TO KILL OR CURE	James White 4
THE HUMANITARIAN	Dan Morgan 32
OUT OF ORDER	John Brunner 40
POINT OF CONTACT	John Kippax 54
OH, ISHRAEL I	Brian W. Aldiss 61
<i>Serial :</i>	
GREEN DESTINY	Kenneth Bulmer 81
Part Two of Three Parts	
<i>Article :</i>	
GALAXIES GALORE	Kenneth Johns 74
<i>Features :</i>	
EDITORIAL	John Carnell 2
THE LITERARY LINE-UP	 53
BOOK REVIEWS	Leslie Flood 125

Editor : JOHN CARNELL

Cover : TERRY

Interiors : LEWIS and JACKSON

Cover painting from "To Kill Or Cure"

TWO SHILLINGS

Subscription Rates

Great Britain and the Commonwealth, 12 issues 26/- post free

United States of America, 12 issues \$4.00 post free

Published on the last Friday of each month by

NOVA PUBLICATIONS LTD., 2 Arundel Street, Strand, London, W.C.2

All characters in these stories are purely fictitious and any resemblance to living persons is entirely coincidental. No responsibility is accepted for material submitted for publication but every care will be taken to avoid loss or damage. Return postage must be included with all MSS.

15th World Convention —London

In last December's Editorial I mentioned that commencing in the New Year there would be a regular column in this magazine devoted to information concerning the forthcoming World Science Fiction Convention to be held in London next September. That column was due to start last month but had to be held up owing to some major changes in the Convention planning, which have now been accomplished.

The most important news is that the venue of the Convention has been changed. Tentatively scheduled to be held at the Royal Hotel, Bloomsbury, it has now been officially booked into the **King's Court Hotel, Bayswater, W.2** where the entire hotel has been taken over for the four Convention days—September 6th to 9th. This puts an entirely different aspect on the whole tone of the Convention, delegates being unhindered by outside members of the general public.

It also means that for the first time in the recorded history of Conventions delegates will dine together during off-business hours, a factor which should go a great deal towards increasing the overall enjoyment of the proceedings, and will ensure that business sessions commence on time. One of the biggest problems at most Conventions has been to find specific delegates or celebrities who are due to appear on a programme after they have gone out for a meal. Last year in New York there were dozens of restaurants within a short distance of the Convention hotel and it proved impossible to check every one of these to find a particular speaker.

Happily, the King's Court Hotel is somewhat isolated from the main thoroughfares, although it is only a few minutes walk from the Hyde Park area of Bayswater and the Queensway shopping district, where a variety of restaurants are available for those who do wish to have a meal out. But the hotel will adequately cater for most people's tastes, having Continental cuisine and being under the guidance of a French maitre d'hotel.

Accommodation is excellent, there being several large lounges for non-business sessions where some of the film shows will probably be put on. For delegates who intend to stay at the hotel for the entire Convention, the daily rate for room and

breakfast is 20/- (\$1.80) a ridiculously low rate for the amenities offered. Meals in the hotel are correspondingly reasonable—Lunch 4/6 (65 cents) and Dinner 6/6 (95 cents).

It is far too early at this stage to publish any details of the Convention programme although the Programme Committee have been steadily compiling the framework of events around which major events will be woven. A lot depends upon which celebrities and professionals are likely to attend, and many of them will not know for some months yet whether they will be available. Similarly, it is still too early to know how many American delegates will be arriving, although several Swedish and German delegates have already booked their accommodation.

One major difficulty at all Conventions is to get them to start on time. This problem will be overcome in September by formally opening the Convention with a banquet luncheon at which the Guest of Honour and other attending celebrities will be introduced. Following the luncheon there will be introductions and speeches at which non-dining delegates will be able to attend. Banquet tickets will cost approximately 10/6.

Elsewhere in this issue you will find details of how to join the Convention Society and where to apply for hotel accommodation and banquet tickets, which is all being handled by the Convention Secretariat. The cost of joining the Society is 7/6 and it will cost you a further 7/6 if you intend to be present at the Convention itself. If it will not be possible for you to be at any of the daily or evening sessions, let me at least urge you to join the Convention Society. Your 7/6 will bring you the official *Journal's* of the Society containing all the news of what will be happening as well as a souvenir programme plus many other interesting items.

But primarily, you really should try and attend for at least one of the days, if not all of them. There is nothing quite like a science fiction convention for friendliness and excitement and the opportunity of talking to some of your favourite authors, as well as making friends with other readers who are interested in science fiction. Certainly no previous British Convention will have been as good as this 15th World Convention is expected to be. The fact that it is twenty-one years since the first official science fiction conference was held in America is an added incentive to make quite sure that science fiction truly Comes of Age.

John Carnell



Author White's latest story deals with another aspect of surgery and medicine—the difficulties faced by a human doctor when confronted by a completely alien life form desperately in need of first-aid. How the doctor goes about it makes a story up to his usual high standard.

TO KILL OR CURE

By James White

Illustrated by JACKSON

The low pressure system centred off the Hebrides was lashing the coasts of Northwest Ireland and Scotland with rain squalls of nearly gale force when Trans-Ocean Airways Flight 317, while radioing her periodic position check, reported engine trouble. The signal was drowned uncompleted by a resurgence of the interference which had been rendering the ether unworkable for the past three hours—unworkable, that was, but for a few short breaks when that peculiar howling vanished with the suddenness of a light bulb going out. During the next such break Flight 317 could not be contacted at all. She was presumed to have ditched and an air-sea rescue operation was mounted forthwith.

But the search depended to a great extent on ease of communication, and that was not possible with the unearthly din screaming out of head-sets and loudspeakers. When consulted, radio and Met experts spoke learnedly and at great length about sunspot cycles and auroral discharges, but they refused to be pinned down.

On a training flight between North Bay on Barra to Londonderry an Anson aircraft found itself—for reasons best known to its navigator, who was, after all, a trainee—over the Derryveagh Mountains of North Donegal, some forty miles west of its intended destination. But the error was fortunate in that they spotted wreckage.

If this was the missing 317 then a near-miracle had occurred. The pilot of the Anson stated that, although he had merely glimpsed the wreck through scudding rainclouds and there appeared to be smoke coming from it, it very definitely was not burnt out. But this state of affairs could not last indefinitely. Something in the wreck was burning, probably a puddle of hydraulic fluid, and despite the rain falling in the area, that fire must eventually reach the fuel tanks.

The survivors, if any, had to be reached quickly.

The helicopter skidded and bounced across the sky, tossed and side-swiped by the up-draughts and cross-winds from the mountains one thousand feet below. This was no weather for helicopters, Terrins thought ruefully. He grunted and hugged his waistline in an involuntary attempt to keep his maltreated stomach in place.

"Is there a doctor on the aircraft?" he said.

It was a pretty feeble attempt at humour, Terrins knew as soon as he spoke; like himself at the moment, sickly.

On either side of him Malloy and Thompson smiled with the politeness due a Lieut-Commander (Medical) from those of the lower deck, though their eyes never left the rugged terrain unrolling steadily beneath them. Sub-Lieutenant Price, navigating and in charge of communications when the interference allowed them, had his head-phones on. Lieutenant Stephens in the pilot's position was just far enough away from the Lieut-Commander for him to pretend that he had heard nothing.

Suddenly Price stiffened, an attentive expression on his youthful, rather boney face, then he pulled off the head-phones with an angry motion and spoke.

"The people in that Anson can see about as well as they can navigate," he said in disgusted tones. "That was a signal from *Argus* saying that Flight 317 turned up at Renfrew seven minutes ago on three engines. No flap, no panic—the passengers didn't even know that an engine had seized up. Seems 317's radioman put down the interference which interrupted his signal to self-oscillation or something in his own set, and he didn't receive

our later messages or know that there was a search on for them because he was taking his set apart to find out what was wrong with it."

He ended, "*Argus* says to return at once."

Terrin's strongest emotion was one of relief. Though he had been senior medical officer on the aircraft carrier *Argus* for two years now, the times he had been up in the ship's pick-up helicopter could be counted on the thumb of one hand. Compared with the bouncing around he was suffering at the moment, the thought of the large and relatively steady deck of the carrier—at present anchored in Lough Foyle with the rest of the squadron taking part in the forthcoming exercises—was a very pleasant one. With luck he would be back on board in another twenty minutes.

But Price had barely finished talking when Thompson shouted, "Wreckage!" and pointed.

"I see it," Lieutenant Stephens acknowledged, then: "Price. Report this to *Argus*. Tell them that under the circumstances we will investigate this wreck before returning." He looked back, seeking corroboration of this from Terrins, who nodded. "All right. Seat belts! Down we go . . .!"

The wreck had not yet caught fire, Terrins saw, though a haze of white smoke around it was being pulled into tatters by the wind. The long, silvery fuselage seemed virtually intact, and there was very little wreckage in the immediate vicinity. Terrins did a startled double-take at that. Where were the smashed and disembowelled engines, the crumpled remains of wings and tail-planes? There was nothing of that nature in the area at all. Only a peculiar difference in the colour and quality of the ground near the wreck . . .

Terrins brought his attention back to Stephens with a rush as the pilot shouted a warning. Stephens had been trying to land on a reasonably flat-looking ledge of rock about fifty yards to windward of the wreck. But close to the ground the wind was a treacherous, unpredictable thing which had to be out-guessed rather than judged. The helicopter was down to within a few feet of the ledge when a freak gust hurled it crabwise into the hillside. An undercarriage leg struck, and snapped off. They canted forward drunkenly. Two more tremors shook the aircraft as two of the rotor blades ground themselves into ruin against the stony hillside. There was silence then but for the whistling of the wind and the angry muttering of Stephens. Finally he raised his voice.

"Tell *Argus* there are two wrecks now," he said glumly. "I'll give you a list of spares I think we'll need to get this thing airborne again . . ."

He broke off as Price shook his head and held one of his ear-phones outward so that they could all hear the noise coming from it. The interference was back.

Now that they were down, the drill was to first see that any fires burning in the wreck were either put out or kept under control until the casualties were removed. But Terrins' mind was not on the issuing of fire-extinguishers or any other aspect of the rescue drill, it was focussed solely on the wreck.

"That's not smoke coming from it," he said when the silence had lasted several seconds. "That is *steam* !"

"I don't like this, sir," Stephens said nervously. "That isn't an aeroplane. You can see that."

Terrins could—they all could—and he did not like it either. He said, "I'd say it's a rocket, an unsuccessful try at a manned orbital vehicle. What do you think?"

"There are no venturi openings for the rocket motors," Stephens replied. "And no stabilizing fins."

"Let's have a closer look," Terrins said. He had been talking, he realised now, just to fill time until his seething brain came up with something which would fit the observable and highly disturbing facts before them.

Except for the stoved-in appearance of the nose and the long, yard-wide rent where the shock of collision had caused the hull plating to open, the wreck was a streamlined, featureless torpedo-shape roughly two hundred feet long and twenty in diameter. But more disquieting than the sight of this enigmatic wreck was the appearance of the ground for about twenty yards around it.

It was as though a giant sledge-hammer had struck the rocky hillside, leaving a regular, saucer-shaped depression where the tangle of heather and scree had been literally driven into the ground. A flattened mass of leaves and splinters showed where one small, lonely tree had stood. And in the centre of this highly unnatural depression rested the wreck.

Terrins felt a chill go through him that had nothing to do with the cold, wind-driven rain that lashed at them suddenly from behind. Sunset was still two hours away, and already he was peopling this bleak hillside with bogey men—or bogey somethings. He made a great effort to get his thinking processes straightened out, then spoke.

"Obviously, this is a spaceship of some kind," he said, and swallowed. He waved his hand at the flattened bushes around them. "And this looks as if . . . as if it *pushed in* the ground somehow in trying to cushion its fall—as if the shock of collision was absorbed by a large area of ground surface instead of by the ship alone.

"I'm only guessing," he went on, "but I'd say that this meant that it had some control of gravity or inertia. Certainly it is beyond the crude rocket motor stage . . ." He broke off, looked at the three men who had accompanied him to the wreck—Price had been left standing by the helicopter's radio—and ended briskly, "Whatever gadget they used, it wasn't quite good enough. They crashed."

And that was a very reassuring thought, Terrins told himself. He was curious about this wreck, intensely curious. But his curiosity had been more than off-set by anxiety regarding whatever form of life it might contain. His imagination had run riot on that particular track. But the ship was, after all, a wreck, and *dead* bogey-men could not hurt anyone.

The gaping tear in the hull was wide enough for a man to crawl through. Terrins flicked a wetted finger against the plating. It was hot, but not excessively so.

"You're not going *in*!"

Terrins had not meant to enter the wreck, but something in the shocked, incredulous tones of Stephens touched the mule-like streak of contrariness in him. Always when someone told him that something could or should not be done in that particular tone of voice, an unreasoning urge overtook him to do it just to prove how wrong they were. Usually they had been proved right and himself wrong, but that had not cured him . . .

"Certainly I intend going in," he said, bending to look into the opening. "It's dark inside. We'll need lights."

He stressed the 'we' slightly, and took a perverse delight at the sudden fright in Stephens' face as the pilot began expostulating wildly. This was an event of unparalleled importance which had occurred, he insisted. They should report it and await instructions. This sort of thing was a job for specialists, anyway, and so on. There were a lot more reasons, all good ones, why they should not enter the alien ship just yet.

But there seemed to be a devil driving Terrins, a stubborn, angry devil. Stephens was being eminently sensible, and Terrins himself realised that. But he had, he felt, committed himself

to a certain course of action and could not back down now. Thompson and Malloy, the two sick-bay attendants who had recently joined the *Argus*, were standing by with carefully expressionless faces. Were they thinking that the Lieut-Commander was allowing Stephens to talk him out of something he was afraid to do, anyway? Terrins clenched his teeth and gestured for the pilot to be silent. One thing he did know, if they were going inside the wreck, then his reasons for going had to appear as strong to him as Stephens' reasons for wanting to stay out.

"Lieutenant Stephens," he said sternly, "let me remind you that we were sent to the aid of survivors of this wreck, and while the wreck did not turn out to be the one we expected, I am specialist enough in my own field to think that our instructions still stand."

A heroic little speech, Terrins thought in sudden self-disgust, *you big ham, you.*

But it stopped the Lieutenant's arguments cold. Terrins watched the pilot's face as he considered this aspect of the affair, and the changing expression as his imagination began painting lurid pictures of the physical forms which these survivors might take. Terrins had not thought very deeply on that point either, and felt suddenly uneasy. What had he talked himself into this time . . . ?

A hail from the helicopter interrupted them, followed by the shouted information that Price was in touch with their ship again. Did they have anything to report?

It was not until a good twenty minutes later that Terrins insinuated himself into the gap in the ship's hull and peered about. *Argus* had been not too politely incredulous about their story of finding a wrecked spaceship, though they had eventually been convinced that the helicopter's crew had encountered a wreck of some description. They had phoned through to Letterkenny, the nearest large town, to send ambulances to the spot. Regarding the investigation of the interior of this alleged spaceship, they didn't care who went in. They had been quite short about it.

It had been Stephens' idea that Terrins run a line from the grounded helicopter to a telephone head-set which he would carry with him into the wreck. In this way Price in the helicopter could relay their findings directly to *Argus* with minimum delay. And, of course, if anything should happen to them . . .

Terrins deliberately left that thought unfinished and moved a little further into the ship. The torch showed that he was in a large, rectangular compartment with nothing in it that moved. He called for the others to join him.

The pooled light of four torches showed more detail.

Ceiling, three of the walls and the floor they stood on were painted a drab, reddish-grey colour and were relatively free of attached gadgetry. The remaining wall most decidedly was not. Weird-looking mechanisms grew out all over it to a distance of a foot or eighteen inches, and there were trailing wires and torn metal where others had apparently been ripped from their bases by the crash. A broad, shiny black line began at a semi-circular opening in an adjoining wall and looped around each of the machines in turn, crossing and joining up with itself several times before disappearing through a similar opening in the opposite wall.

Terrins was on the point of describing their surroundings to Price in the helicopter when it suddenly struck him that he was standing on a wall instead of on a floor, and the 'wall' with the machinery, black curving lines and opening several feet above the 'floor' was the true floor. The two-foot high, semi-circular opening was a door!

"I'm taking notes, not relaying," Price said when Terrins made the correction. "The interference is back, sir."

It was a struggle for Terrins to get through the opening and into the compartment beyond—the black stuff was both sticky and oily and it came off on his clothes; it did not smell very nice, either. The others, being slimmer, had less trouble.

This was a long, narrow compartment, and the mechanisms growing out of the floor beside and above them were more numerous and complicated. The broad black lines were everywhere. In the middle of the room a descending ramp, with the ever-present black band along its centre, led into the depths of the ship. Terrins was considering ways of climbing to the ramp using the machinery projecting from the nearly vertical floor when an exclamation from Thompson made him swing round.

He saw his first alien.

Terrins was reminded strongly of a tubby, pink and over-stuffed sausage and, because he had been expecting some larger and more grotesque horror, he felt quite relieved as he moved closer. Why, he told himself, he had seen worse things than this while weeding the garden.

He saw that one end of the pink, slug-like body was pinned down by a heavy piece of equipment which had broken free in the collision, and there was a quantity of reddish-brown goo around which was probably the creature's blood. A knob-like protuberance on its other end—a watery blue colour, this—was probably an eye, and two flaps of skin partially covered it. Immediately behind this was a sort of cock's comb which terminated in three pencil-thin tentacles each about six feet long. Two of these were wrapped tightly around the creature's body and the third extended stiffly into the wreckage strewn against the forward bulkhead. The thing was twisted so that a large, oblong pad on its underbelly showed clearly. This pad was black and had a wet shine : Terrins concluded that its method of locomotion resembled that of a snail, and the broad black lines connecting the various items of equipment they had seen were in the nature of prefabricated snail tracks !

Terrins' skin crawled at the thought of that black stuff smeared all over his clothes, and revulsion fought with his intense curiosity regarding the creature. He drew back slightly ; he could just imagine what the thing would feel like to touch—cold and wet, and maybe sticky . . .

“ Can you do anything for it, sir ? ”

It was Lieutenant Stephens who had spoken. His face was pale, on the greenish side rather than white, but there was a vindictive gleam in his eye. Lieut-Commander Terrins had entered this wreck against Stephens' advice not to mention all the dictates of common sense, the pilot's tone implied. He had overridden this good advice, moreover, with the flimsy excuse of being a doctor confronted with a wreck which might contain survivors. Now Stephens was calling on him to do the impossible, and looking forward to seeing his superior officer squirm.

Secretly, Terrins could not blame him.

“ It may already be dead,” he replied ironically. “ In which case I doubt if anything can be done for it . . . ” As he spoke he forced himself to touch the thin tentacle which stretched stiffly from the creature to a mechanism which was partly buried in the wreckage heaped against the forward wall.

He was surprised to find that it was warm to the touch, then startled as it slid away from his hand and came whipping back. There was very little force behind it, but the tip of the tentacle was roughened enough to lift a narrow strip of skin off the back of Terrins' hand. The tentacle coiled and uncoiled uncertainly.

then fell limp. The creature's body began a slow, quivering motion all over.

"Well, it seems to be alive and, er . . ." he forced a smile, ". . . twitching."

He was saved from having to say or do anything else by Price's voice in the head-phones saying, "The interference has gone again, sir. Have you found . . . I mean, is there anything fresh you want me to report?"

"Yes . . ." Terrins began, and brought Price up to date. He ended, ". . . and tell them I intend going as far as possible into the wreck. But from what we can see the ship's outer shell is extremely strong compared with the interior structure—the inside is a shambles, so we may not get very far."

He turned to the creature quivering like a large pink jelly at his feet, and with the help of the others he tried to lift the girder and twisted plating which pinned it down. But the mass of metal extended deeply into the main wreckage and they had to stop in case the whole unstable mass caved in and buried the creature completely.

Terrins began climbing to the ramp in the centre of the nearly vertical floor which led to the adjoining compartment.

Warm to the touch, he was thinking. A high body temperature usually meant a warm-blooded oxygen breather, and the fact that the creature continued to live when the tear in the outer hull had opened the ship to Earth's atmosphere seemed to prove that ordinary air was not harmful—or immediately harmful, he corrected himself—to it. And the reddish tinge of its dark-brown body fluid also indicated an oxygen exchange system similar to that of a human being.

It was sheer stupidity to suppose that he could aid them in his capacity as a doctor—that type of medical miracle was strictly B-feature stuff. But he should be able to deduce something from visual inspection of the creatures which would at least allow him to proceed without harming them further.

They breathed air and they possessed a normally fast metabolic rate. Terrins blew on his skinned knuckles at the memory of that whiplash tentacle. Muscular action of that nature used up energy, and energy lost had to be replaced . . .

Terrins stopped in the sudden realisation that there was no way for that energy to be replaced. He had noted a small, porous area on the alien's upper surface through which it breathed, but nowhere on the injured creature had he found

anything resembling a mouth ! A highly developed organism simply could not function by breathing and nothing else.

But apparently these creatures did not eat.

Stephens, who was following him along the ramp, bumped him from behind. Terrins, in a kneeling position with one hand holding his torch, lost balance. He put the other hand out instinctively to keep from falling onto his face and it landed slap on the oily black line which the snail-like aliens used to get about the ship. It skidded to a sticky halt and the unpleasant odour—slightly fishy, Terrins thought, and a little like the smell of seaweed in the sun—struck at his nostrils. He noticed, too, that his sliding hand had wiped some of the black stuff off the metal underneath. Greenish yellow liquid began to ooze through what had seemed to be solid metal until the cleared patch was filled, then it rapidly turned black.

Terrins had the frustrating feeling that the key to the problem puzzling him was staring him in the face if only he could jog his alleged brain into proper working order. But he was still worrying at the problem a few seconds later when the end of the ramp was reached. He helped the others out, then their torches swept this new compartment.

Thompson was briefly and violently sick.

The true floor of this compartment was only about twenty degrees off the horizontal. Terrins did some quick mental calculations and decided that the cylindrical interior of the alien ship was divided lengthways into three decks at one hundred and twenty degree angles to each other, with whatever machinery was used to furnish the artificial gravity operating from the longitudinal axis of the ship. Had the artificial gravity been working he was sure that all three decks would have been 'down' to those occupying them. But the mechanism and occupants had both suffered in the crash, and by the look of things in here the latter had had the worst of it.

This compartment must have been crowded at the time of the crash. The usual debris lay heaped up against the forward bulkheads with the snail-like aliens lying in, on and under it. Had Terrins been immediately interested in the alien internal structure he would have had no trouble in setting to work, because several of the creatures were in more than one piece. The ones who were not all too obviously dead lay in the tangle of metal and quivered silently.

They've no mouths, Terrins thought suddenly. They can't scream and even their breathing is silent. All they can do is lie and shake in agony. All at once he wished desperately that he could do something for them. But what could he do? He had been unable to even discover if or how the things fed, much less finding out a means of patching them up . . .

An idea he had had a few minutes earlier began to take form in the back of his mind. But it dissolved as the voice of Price came hesitantly from his head-phones.

"Excuse me, sir, I thought . . . I mean, I wondered . . ." The navigator's voice stopped. He cleared his throat—a deafening sound in the head-phones—then got out, "The Derry operator—Derry is listening to us, too, now—and I have been talking. Things have changed there, he says. They don't think you're d——" he broke off in confusion, after very nearly having said too much.

Terrins, said, "Drunk, Mister Price?"

"Yes, sir," Price agreed, his voice gaining confidence now that the Lieut-Commander had taken the word out of his mouth. He went on, "Seems that the general feeling in Derry was that Lieutenant Stephens had piled the aircraft up on a cold mountainside and we were keeping warm with alcohol from the hydraulic system. But they don't think that now," he added hastily.

Terrins' mind had been too busy with the immediate problem to wonder what they had been thinking about him on *Argus* or at Londonderry Base. But Price seemed bursting to tell him something, and the roundabout way he was going about it meant that his news could not be official. Terrins made an interrogatory sound in his throat and waited.

"This is only a rumour, you understand," Price went on. "But the Derry operator says that the American Liaison people are in a tizzy over a message they've just received. Seems there's another spaceship, and this one isn't wrecked—"

"What!"

At his exclamation, Stephens a few feet away gave him a startled look. Terrins unclipped one of the ear-phones from his headband and motioned for Stephens to listen in as well.

". . . Yes. Seems the Americans were tracking a Mouse on radar—er, that means Minimum Orbital Unmanned Sat—"

"I know what a MOUSE is," Terrins said irritably. "Get on with it!"

Apparently the team hunting for a Mouse had caught themselves an elephant. An object which was at least one thousand feet long had appeared suddenly on their radar screens, approaching at a velocity that was starkly incredible and braking that same velocity at a simply impossible rate. It had descended to within four miles above the Florida coast, hung there for perhaps three minutes, then headed inland at a speed which left the fastest pursuit ships standing. All armed forces had been alerted, which included the American Naval units taking part in the forthcoming exercises.

The Derry operator knew all this, Price explained, because the Americans in the radio room were talking about it at the tops of their voices. But it was not yet official, though no doubt it soon would be. Then instructions could be expected from the *Argus* for them . . .

Price broke off at that point to say that another signal was coming through, then he said, "It's from *Argus*, for you, sir. Your orders are to remain there and not to damage or disturb any devices or machinery inside the spaceship. They are hoping to learn something from them which might help against the other ship. The latest information on it is that it has reached the west coast of the United States and has turned back the way it had come and is on a track parallel and approximately twenty miles north of the original one, so that they think it may be mapping the area. Other countries are being warned to watch for similar ships—"

"Reconnaissance!" Stephens burst out suddenly. "Of course! The first step in any war. But the ship assigned to this area had an accident and crashed . . ."

He left the sentence hanging as his eyes darted about the shambles around him, seeing it suddenly in a new light. Malloy and Thompson, who had not heard the news by virtue of the fact that the head-phones only had two ear-pieces, shuffled restively and made querying noises. Terrins filled them in quickly then turned to Stephens.

Irritably, he said, "This does not necessarily mean we're being invaded. It could be a peaceful survey or exploration mission. Why—we don't know for sure that both ships are part of the same operation. They may be from entirely different localities, and contain different forms of life with different intentions towards us—"

"That's stretching coincidence a bit, sir."

"I agree. But . . ." Terrins began, then broke off. He wanted to tell Stephens that they should be careful, that everybody should be careful—especially that small, widely scattered section of the Human race with the authority to start something which they might not be able to finish. This was a big thing and it had to be handled properly from the start. But talking about it would do no good where Stephens was concerned. Stephens had an idea fixed in his mind that the Earth was about to be invaded, and it was the kind of exciting idea that a young man of Stephens' temperament would not give up easily. The ones to convince were the higher-ups, and they, unfortunately, all too often thought like Stephens.

Terrins remembered suddenly that Price had still to finish whatever he had been saying when the pilot had interrupted them. He said, "Sorry, Price. Is there anything else?"

"No, sir—except that you are to take charge of and be responsible for the investigation until the Eire Government give permission for us to send a team of experts to relieve you. Meanwhile you are to find out all you can."

"The Eire authorities won't mind that? Why don't they send them now and leave the red tape until later . . .?"

"Well, actually, they're thinking of sending an armoured column, too," Price replied. He added, "And air support."

"But this thing's a *wreck* . . . !" Terrins began, then : "Oh, never mind."

Stephens had been listening on the other ear-piece. Eyes gleaming in the uncertain light of their four flashlamps, he rapidly brought Thompson and Malloy up to date on the latest developments. Thompson seemed gradually to become infected with the pilot's excitement—he broke in once to ask if he should search the wreck for gun turrets—but Malloy's expression remained the same as it had been, a sort of resigned, what-will-the-Navy-throw-at-me-next look. He seemed a lot more interested in the aliens themselves than in their wrecked ship, Terrins had noticed, and at the moment he was gazing intently at one particularly battered specimen.

Terrins said, "Well Malloy, what do you think of them?"

"I think we should kill them, sir," Malloy replied after a short pause. Some strong emotion pulled at his facial muscles briefly, then subsided. He added, "That's if we can't do anything for them. They're in pain."

Terrins had not expected a reply like that, and in some subtle fashion he felt ashamed of himself. Malloy, he thought, had probably been the type who brought stray dogs and starving cats home as a boy—or even as a man. Now there were some aliens—some tentacled, slug-like creatures from God alone knew where—who were hurt. To Malloy it was as simple as that.

"Sir," Stephens broke in, "can I take Thompson and look around this thing? If we got an idea of the layout it would save time when the experts arrive, and we might discover something important."

Absently, Terrins nodded assent. His mind was still busy with what Malloy had said. Kill them or cure them, that was the idea. Yet mercy killing was forbidden where humans were concerned, would it not also be wrong in relation to beings who were at least the intellectual equals of mankind? Terrins thought that it would. But neither could he just let them lie there without trying to do something.

Stephens and Thompson moved astern, their torches throwing weird, surrealistic shadows of the wreckage ahead of them.

Terrins said, "Suppose we try to find one of these creatures who is not too badly injured. Maybe we could help a case like that."

Malloy said, "Perhaps so, sir."

And maybe we couldn't, Terrins thought. But they could try anyway. Aloud he said, "That one over there in the corner doesn't look too bad, we'll try him."

This particular alien was battered but apparently still in one piece, and the constant shuddering of its body proved that it was still alive. Its hide was a mass of shallow incised wounds—suffered, no doubt, by its being flung against the forward bulkhead—and its three tentacles lay limp. A human in the same condition would have been a quite horrible sight, but the gore of the aliens was not the primary red of human blood, and it was a little difficult to feel deeply for a shapeless, pink sack which leaked something that had all the appearance of thick drinking chocolate.

He said, "Lend a hand. We'll lift it onto that clear section of deck, then we'll see if we can do something . . ."

Certain types of treatment were indicated, he was thinking as they linked hands under the warm, quivering mass and drew it free, when an organism displayed symptoms of a certain nature, no matter what its size, shape or origin might be. And if these

symptoms included bleeding—or, in this case, the loss of a fluid equivalent to human blood—then the idea was to stop it. That course of action could do no harm, Terrins was sure, and it might even do good providing the creature had not also sustained internal injuries which would ultimately prove fatal. At least it was something to do.

He said to Malloy, "Right, we'll clean the brown goo from the wounds, then you push the edges together with your fingers while I cover them with a sterile pad. Better that, I think, than using sulfa or penicillin dressings—they might be poison to its system. A few strips of tape will hold the pad in place and keep the wound closed . . ."

Once Price's voice interrupted the work to report that no other countries knew of spaceships violating their territories so far, and that the one over the United States was now on its second east to west leg. It was making no effort either to approach or to avoid large cities adjacent to its course, which made the observers pretty certain that it was on a mapping expedition. Price added that questioning of the radar men who had first noted the arrival of the spaceship had elicited the fact that the craft had just popped into view on their screens and had not been coming from anywhere. This they swore to. Mathematical experts and science-fiction readers among the high brass were now throwing words like 'space-warp' and 'hyper-drive' about . . .

Shortly afterwards Stephens and Thompson returned. The pilot reported that the after half of the ship's interior was impenetrable, due to what seemed to be a large number of semi-permanent fittings—metal partitions, sections of plumbing which leaked the black stuff, and so on—being torn free in the crash. The number of creatures mixed up in the wreckage led Stephens to suspect that the ship was either a passenger vessel or a military transport. Whoever had to cut a way through it later was in for a very nauseating time, he added.

Terrins grunted acknowledgement, passed across his mike so that Stephens could repeat his report to Price in the helicopter, then returned his attention to the work in hand. Thompson bent to do his share, moving the creature slightly so that the black pad on its underside was partly exposed. Terrins found his mind going back to the paradox of this animal which possessed the powers of respiration and mobility and yet did not eat. Even if they moved like snails they could not live solely on air.

The pad on which the alien travelled resembled an oblong of black astrakhan fur, and the pile of the fur was in constant, waving motion. Suddenly, Terrins thought he saw light.

The patching-up job, as he had mentally referred to it, was finished. The alien lay quivering on the metal deck, an incongruous, strangely pathetic object. Terrins thought of a Humpty-Dumpty who had been put together again with sticking plaster. The patient, however, showed no other signs of life.

Malloy and Thompson were bent over it, staring intently as if willing it to do something, anything, besides shudder. After a few minutes silence, Stephens spoke.

"I think it's dying," he said. The remark was somewhat lacking in tact considering the work Terrins and the two sick-bay ratings had put in with it. Positively, the pilot added, "I think they're all dying. It's only a question of time."

Terrins felt his face and neck getting hot, and kept silent with an effort. If his idea about these creatures was correct he would quickly wipe that smug, know-it-all look from Stephens' face. He nodded for Malloy to help him, then together they lifted and moved the alien until it was over one of the broad, black lines which curved and crossed all over the deck. Terrins said, "Gently now, put it down."

Three seconds later he said, "Lieutenant Stephens, your mouth is open. Were you going to say something?"

Slowly, but with an air of great determination, the alien was moving along the black line on which they had placed it. The two flaps of skin covering its eye drew back and it seemed to stare at them, and the three limp tentacles twitched, curled, then rose slowly upwards. The men stepped back hastily, but the creature merely continued slowly along the shiny black line on the deck, erasing it as it went.

Stephens made stabbing motions at the creature with his index finger. His mouth was now opening and closing, but he still had not found his voice.

"Pick out another likely specimen," Terrins said to Malloy and Thompson. "We may be lucky again."

While they worked over another alien who appeared to have only superficial injuries, Terrins explained the seemingly miraculous 'cure' of alien Number One.

"As I see it," he said, "their race must have developed first on the banks of a tidal river—or perhaps a shallow beach—the

surface of which was carpeted with tiny forms of edible plant or animal life, animal in this instance also referring to the sea life left high and dry by receding tides. The creatures ingested through the black pads on their undersides, which were also used to move themselves forward when the supply of food immediately below them was exhausted."

Terrins continued by saying that his guess was that the tentacles and eye had originally been a defence against natural enemies, probably of a winged nature. It was also his opinion that the creature's inefficient methods of food intake forced it to eat constantly in order to remain active—he likened it to a man being forced to exist on soup soaking through blotting paper. When they had evolved to their present high level of technology, a constantly renewing food-source and method of getting about was provided by the broad black lines which curved and circled all over the ship. The men could see for themselves how the creature apparently erased, soaked up, the line as it moved along it, and how a greenish fluid which rapidly turned black oozed out to replace the fluid absorbed.

"... They're an awkward, slow-moving species," Terrins concluded. "When the crash piled them against the forward sections of the ship, even the least seriously injured could not extricate themselves to return to their . . . er, food tracks."

Stephens, looking impressed, turned to regard the alien they had 'cured' again. He pointed suddenly and said, "Look! What's it doing . . . ?"

The alien was moving slowly along the food track which circled one of the few undamaged control panels in the compartment, its tentacles doing business-like things with the grooved, roughened handles which covered its sides.

Stephens said anxiously, "We should be careful about putting too many of these things back on their . . . their feet. There's no telling what they might do—"

Suddenly the lights came on. It was a harsh, greenish light which robbed the men's faces of all colour, given off from what had been a continuous tubular strip just above floor level, though now there were several breaks in it. The alien withdrew from the control panel and approached them again. Thompson jumped suddenly to his feet. The alien, only a few yards away by this time, halted and seemed to shrink backwards.

"Thompson, you horrible two-eyed monster, you," said Malloy derisively. "Stay still, you're scaring the poor thing to death."

Terrins giggled in spite of himself. He said, "That's true, you know. To it we must look pretty fearsome specimens, and big, too." He made his tone more business-like and went on, "Anyhow, this lighting is a lot better than flashlamps, so let's see how fast we can fix up his pal here."

But apparently the alien had other ideas.

Stephens hissed a warning as the creature came suddenly closer and sent a hesitant tentacle towards the three men bent over its companion. Malloy, busy taping up a four-inch gash near the second alien's eye, gave a yelp of surprise as the tentacle wrapped itself gently around his wrists and gave a slight tug before letting them go. This was repeated on the hands or wrists of Thompson and Terrins, then the peculiar process was begun again with Malloy.

After a few minutes of it, Malloy said, "You know, sir, I think it doesn't want us to work on its pal here. It keeps trying to pull our hands away."

He sat back on his haunches.

That was probably it, Terrins thought. One alien would know better than they whether they were wasting time trying to help its injured companion or not. If the case they were working on was hopeless, and the other alien knew it, then the creature's next step would be—*must* be—to indicate to them which of its companions they *could* help . . .

Sure enough, all three tentacles curled around Malloy's arm, and this time they did not let go. Tugging and straining, the alien tried to make Malloy follow it. The rating's face was a study. His mouth was open and one eye-brow had practically disappeared into his hairline. Terrins said quickly, "Better follow it."

During the few minutes the creature was pulling Malloy towards the pile of wreckage forward, Thompson got in a couple of nasty cracks, *sotto voce*, to his friend about taking dogs for walks. But at the tangle of metal and components it stopped, released him, and pointed with all three tentacles at another alien who was partially buried in the debris. While the others were getting it free, Terrins brought Price in the helicopter up to date.

Before relaying the report to Derry, Price told him that there was no fresh news. The other spaceship was still flying in parallel lines back and forward across the southern United States.

The injured alien was free by this time, but the one they had patched up made motions for it to be placed on a food track and would not allow them to work on it afterwards. Terrins watched it move laboriously along the track. It shuddered continuously, and one tentacle had been torn off and the dark brown blood seeped from lacerations all over its body. Terrins thought that Alien Number One was being a little heartless.

Alien Number One was indicating another casualty to be rescued.

Half an hour later there was a total of five aliens moving about the compartment, and some of them were so badly cut up that Terrins was surprised that they lived at all much less moved. Apparently this was a tough breed. He did, however, feel a little bit miffed at their refusal to let him try working on them, but he supposed they were afraid in case he did something wrong and accidentally killed one.

Stephens had grown progressively more anxious as each new alien became mobile. He wanted to leave the rest of them where they were. You could not trust them, he stated. Given half a chance they would overpower or kill the humans, repair the ship and take off to wreak death and destruction all over the country . . .

Terrins was reaffirming for the fourth time that the physical structure and condition of the aliens made the overpowering of anything larger than a kitten impossible, adding that the pilot had been influenced by too many B-features, when the deck beneath him gave a peculiar lurch sideways. He staggered, and had the sudden feeling that he was going down in a fast lift, then everything returned to normal again.

But not quite ; the deck on which they were standing was no longer tilted at an angle of twenty degrees or so, it was now level.

"The ship must have rolled over a bit," Malloy said. It was hard to tell whether he was making a statement or asking a question. He added, "I feel funny."

Terrins felt it, too, a queasy sensation of still going down in an elevator and the light-headed feeling that if he was not careful he would drift ceilingwards. Apparently the aliens were feeling light-headed, too, because he noticed them moving along their food tracks at a surprisingly fast pace—fast for snails, that was. Two of them disappeared into the ramp which the men had used to enter the compartment. The other three, led by the taped-up one, made for the human party.

"I don't trust these things," said Stephens again.

Terrins was beginning to have misgivings himself. As the three aliens wriggled nearer he found himself swallowing with a mouth which was too dry for it to be done comfortably. But when Alien Number One stopped before them and, with unmistakable wavings of its tentacles, merely indicated that it would like its companions' hides taped up the same as its own, Terrins cursed himself silently as a coward for being afraid of them.

"I still don't like it," Stephens said doggedly. "I'm going to see what those other two are up to." He disappeared in the wake of the two aliens. Almost immediately they heard an exclamation of surprise and a yell of "Come here, quick!"

Terrins was first into the descending ramp. He was startled to find that he could walk along it instead of having to crawl down it backwards. And when he arrived at the floor of the adjoining compartment, which had been vertical when they had first entered—he found that he could walk upright on it, too. The gaping rent in the hull through which they had entered was now in the wall facing them, and it was sealed by hard-packed earth and rock. Apparently the ship had rolled over, trapping them for the time being inside.

Something cold and tight seemed to grow in the region of Terrins' diaphragm. A well-defined symptom of fear, he thought sardonically, and tried his best to ignore it. He said:

"Obviously they've put their gravity control system back in working order as well as their lighting. More deck area—and therefore more food tracks—are available to them now. You must admit that they're doing all they possibly can to help themselves, or rather, to help us help them." He forced a smile. "I hope we have tape enough for all the patients."

The truth was that Terrins felt much less confident than he had tried to make out. To his general discomfort was added the uneasy feeling that it was the aliens who were running things now; they were *using* the humans.

"How," said Malloy the Practical, "are we going to get out, sir?"

"Our people will cut a way in," Lieutenant Stephens answered for him. "Or jack up this end of the ship if the other way is too slow." He turned to face Terrins. "But I don't like—"

Price's voice in the head-phones interrupted another of Stephens' dislikes.

"The interference is back, sir, bad as ever." He sounded faintly disgusted, probably because the gossiping Derry operator was no longer available to relieve the boredom of waiting. "It's funny, sir, but it disappeared a few minutes after you entered the wreck. I thought it had gone for good."

Coincidence, of course, Terrins thought; it had to be. But his uneasiness increased nonetheless. He asked, "Did you see the ship roll over?"

"No, sir. It's almost dark out here."

Dark! That meant . . . With an unbelieving look at his watch he saw that they had spent over three hours in the ship. No wonder Price was feeling disgusted. He was telling Price to break into the emergency rations for himself when Stephens interrupted him again.

"What's the attraction in that corner there?" he said, pointing. "What are they doing, anyway?"

A few yards away two aliens were huddled against a tangle of wreckage which was pinning down a third. One of them held a tentacle stiffly as though working at something under the jumbled mass of metal which was just barely within reach. There was a strange familiarity about that position and stance . . .

"Price," Terrins said into his mike, "I'm going to make a test." He gave the navigator brief instruction, detached an ear-piece and handed it to Stephens, then advanced on the aliens in the corner.

This time he used a long piece of metal to knock away the tentacle, remembering the skinned knuckle he had suffered the first time. As he had more than half expected, the instant he nudged the stiffened tentacle away from whatever it had been touching, Price reported the interference gone.

"Somebody," Terrins said with forced lightness, "is not using a suppressor."

Whatever repairs the aliens were trying to make in that corner was the cause of the country wide interruption in radio communications.

"We can't have this," Terrins said, wagging an admonishing finger at the aliens. "Shoo 'em away from that thing, Stephens. I've got to finish my report to Derry."

But the aliens did not want to be shooed away, it seemed. As the minutes passed and Terrins asked and answered questions relayed through the helicopter's set from Derry, Stephens' efforts to keep the creatures at a distance became increasingly strenuous. And the aliens, despite their injuries, were becoming downright

vicious. Stephens, holding a piece of buckled plating before his face to protect it from their lashing tentacles, was reduced to pushing them away with his feet. He was not being gentle about it, either. Whatever gadget lay underneath that wreckage it was clear that the aliens wanted to get at it badly.

Malloy and Thompson, who had been in the adjoining compartment keeping an eye on the three aliens there, appeared, attracted by the rumpus. Stephens snarled, "Help me. Don't just stand there . . ."

While pushing at a quivering alien with his foot, Malloy reported that the creature they had patched up was engaged in cutting its way into the stern section of the ship. It was using a gadget similar to an acetylene torch, he stated, but much smaller—and the alien did not have to stand at all close to the metal it was working on. Malloy was quite enthusiastic about the gadget and was wondering if the alien would mind giving it to him, or one like it, as a souvenir, when Price's voice crackled suddenly from the 'phones. He must have been shouting for it to sound so loud.

"Sir! Derry has just had a signal to say that the ship over the United States has suddenly changed course. They plotted its new heading, it's coming this way!"

Stephens had heard it also, the ear-piece still being clipped to the side of his cap. His face went white.

"It's a radio!" he babbled. "The thing they're trying to get at is a radio. They've been contacting their friends—"

"That's the gadget there," Malloy broke in, as yet blissfully unconscious of this latest development. He pointed.

Alien Number One, looking vaguely piratical in its taping, crouched in the mouth of the entry ramp. The gadget so admired by Malloy which cut through metal walls at a distance was held firmly in one outstretched tentacle.

"Don't move," Stephens whispered urgently. "Listen . . ." He quickly told Malloy and Thompson what had happened. While he spoke the two aliens he had been fending off wriggled around him and made as if to resume their interrupted work at the radio. He continued, ". . . Now that other ship must have taken a fix on their last transmission, that's why it's suddenly heading this way. But I don't think it will be able to find us unless the aliens transmit more or less continuously. One fix

at three thousand miles is surely not enough to pinpoint us with the necessary accuracy."

He faced Terrins : " You agree, sir ? The only way we can escape is for them not to find us. That other ship will be moving fast, too fast for us to dig our way out of here before it arrives. And you know what will happen to us if we're caught—we'll be the specimens . . . "

" Interference is back," said Price.

" Get out of there ! " Stephens cried, and swung viciously at the alien who had worked its way behind him, his weapon the section of metal plating which was still in his hands. There was a sound like tearing cloth and a foot long rent appeared on the flank of the already tattered body of the alien. The force of his swing—only partly expended by that glancing blow—sent him stumbling. He tripped and fell, to which accident he owed his life.

The wall where he had been standing showed a bright orange patch at what would have been the level of Stephens' waist. Terrins could feel the heat of it from three yards away.

On the human side most of the action was instinctive after that.

It was several minutes later. Terrins and Lieutenant Stephens were making themselves as small as possible behind the remains of a low control desk. Malloy and Thompson had found similar cover a few yards away. Alien Number One was keeping them pinned down with its long-range cutting torch—even in his mind, Terrins balked at referring to it as a heat ray—and, flanked by its companions from the adjoining compartment, was edging steadily nearer. There were three aliens advancing in front of them and two behind. Of the latter, the one which Stephens had sliced with the metal plate had stopped moving. The other one had taken its place at the transmitter. And in the helicopter outside, Price was reporting interference again.

" We've got to stop it signalling," Stephens said.

Terrins did not answer. He was not feeling particularly afraid, strangely enough, but he felt hurt and very, very angry. When he had treated that first alien successfully, Terrins had felt a great sense of accomplishment, almost a feeling of pride—and he had taken it for granted that the being concerned would show a certain amount of gratitude for said treatment. But instead of gratitude they were trying to roast the humans with some weapon or other . . .

Stephens' voice broke suddenly in on his thoughts. The pilot, seeing that no help was forthcoming from the Lieutenant-Commander, had assumed command of the situation himself.

" . . . Malloy and Thompson. Pick up any loose metal near you suitable for throwing. When I give the word, let fly at the alien with the weapon. You've got to distract it for a few seconds. All right? Now . . . ! "

An assortment of metal began bouncing off and around Alien Number One. Stephens sprang to his feet, a twisted strip of plating in his hands. He brought it over and down like a broadsword. Terrins glimpsed the quivering body of the alien at the transmitter, and its three writhing stumps of tentacles, then Stephens gave a gasping cry and dived for cover again. The leg of his uniform trousers was a charred rag and the flesh beneath was a raw, bright red, but his pain-distorted face made a grimace that must have been meant as a smile when Price reported that the interference had gone.

The remaining three aliens advanced slowly.

Relayed from Derry came the report that the second spaceship had been sighted three hundred miles off the Irish coast by a weather ship. Its Captain had stated that it was moving very fast indeed, its nose section glowing white hot. In Lough Foyle *Argus* was readying her De Havilland 110's and Scottish Command were dispatching a squadron of Javelins . . .

" If they get another fix on us, we're sunk," Stephens said through clenched teeth. His face was white and sweating, he was going into shock, and Terrins' kit was in the other compartment.

Silently, Terrins wondered whether another fix was necessary. Alien radio might be that little bit different from the human variety. But if that were so then there was no hope at all for them.

Stephens was hanging on to consciousness with his fingernails. He said, " If that thing comes much closer it could pick us off one at a time with no trouble. We've got to spread ourselves out, and jump it from three directions at once." He tried to get to his hands and knees, groaned as the partly cooked meat that was his lower leg touched the deck, and subsided again.

" I think I know what you have in mind," Terrins said gently. He was feeling very much angrier now, and things like logic or caution seemed to have been crowded out of his mind. He

took off his head-phones and gave them to the pilot with instructions to keep in touch with Price, then he turned to the others.

With Terrins showing himself briefly and hurling odd pieces of wreckage at Alien Number One to distract its attention, Malloy and Thompson began their outflanking manoeuvre—the two unarmed aliens being ignored for the time being. But fully fifteen minutes passed before they were in satisfactory positions, and Terrins gave the signal to attack.

One jump carried him to the top of the control desk and the second to within five yards of the alien—the lighter artificial gravity in the ship had its advantages, he thought. The alien's weapon was swinging round towards the running figure of Malloy, who had gone into action a split second too soon. He heard Malloy shriek and saw his arm from the elbow down smoke, shrivel and fall off, then the weapon was ranging round on him. He took two running paces forward—they felt as though he was being filmed in slow-motion—and dived blindly at the huddled shape on the deck.

It may have been his imagination, but he thought that the alien held fire for an instant—surely at this stage it was not having qualms about killing the doctor who had patched it up? Terrins struck its soft, resilient body with both hands outstretched, knocking it off its food track and onto its back. The weapon made a fiery zig-zag on the ceiling, then he heard it clatter to the deck.

When Terrins picked himself up Thompson was beating at the alien savagely with a jagged strip of metal. The taping which Terrins and Malloy had applied so carefully was stained brown or hanging loosely from reopened wounds. Suddenly, he felt furiously angry with Thompson; he put his hand on the other's chest and sent him staggering backwards.

Stephens' voice came then, weak but all too clear.

"Price says there's a big ship above us. It's dropped flares and is coming down . . ."

Terrins looked at the shambles around him, at the aliens injured in the crash and at the others who had all too clearly suffered at the hands of the humans. *They aren't going to like this*, he thought sickly, *they're not going to like this at all . . .*

They should have allowed the aliens to summon help, Terrins knew now; that last struggle inside the wreck had been the cause of needless suffering to Stephens and Malloy, not to

mention the aliens concerned. It was a good thing no permanent damage had been done.

Dawn was silhouetting distant Mount Errigal and, although the rain had blown inland, it was cold inside the grounded helicopter. But its occupants were not really feeling it—the condemned man, Terrins thought drily, does not mind if the signature of his reprieve is a bit smudged.

It was all clear to him now : the accidental crash of the spaceship on Earth, the intermittent interference when one of its crew struggled to send a distress call, and his certainty that it was only the fact of the transmitter being damaged that Earth receivers were affected by the signal at all, because it was obviously propagated at a speed thousands of times faster than light. Unfortunately, Terrins' entry into the ship had caused the signal to be cut off just as a rescue ship had appeared above Earth. The ship had begun a search pattern over the nearest land mass—America—until a brief renewal of the signal by a human-revived alien had given it the wreck's position.

The rescue workers had been different from the injured aliens, bigger and with literally forests of arms and legs, and they had been extremely efficient. Practically every occupant of the wreck was showing signs of life before they left, including the ones which the humans had roughened up. But Terrins had put in one very bad moment when one of them had advanced upon Stephens and Malloy with a purposeful look in its nearest eye and waving the alien equivalent of a scalpel. Stephens and Malloy had been carried into the other alien ship, and Thompson and himself had been shooed out of the wreck and then ignored.

But he had felt much better a few hours later when the two men came out again, dazed, but walking unaided on their feet.

Lieutenant Stephens had not had much to say, but all through the night he had been touching or pinching the perfectly sound though hairless leg which had been burned so terribly by the alien weapon. He had asked Terrins once whether it was possible to dream that one was pinching oneself. Malloy, on the other hand, had rarely stopped talking. He was talking now.

" . . . They must have a Health Service, too," he said, waving his right arm and hand in Thompson's face. Terrins had seen that hand burned off and the forearm reduced to a charred stump, and felt like pinching himself, too. Malloy went on, " But it's like ours. They mean well, of course, but they're rushed sometimes and are inclined to overlook things . . . "

He was mighty proud of that hand, a fact which he tried unsuccessfully to hide by continually griping about it. He held it out again for all to see.

Terrins was thinking of the airliners which sometimes were forced down in the jungle, and of the natives who in their ignorant but well-meaning fashion tried to help the injured. But when proper medical assistance arrived, the doctors treated everyone as a matter of course—including the natives whose ignorant meddling had placed them also on the casualty list.

" . . . Even the best dentists pull a wrong tooth sometimes," Malloy was saying in withering tones, " But this . . . Well I ask you, *six fingers* . . . ! "

James White

1957

15th

1957

WORLD SCIENCE FICTION CONVENTION

(Sponsored by the World Science Fiction Society, U.S.A.)

SEPTEMBER 6—7—8—9

KING'S COURT HOTEL, LEINSTER GARDENS

BAYSWATER, LONDON, W.2.

● OVERSEAS DELEGATES

● DISCUSSIONS

● CELEBRITIES

● SPEECHES

● BANQUET

● AUCTION

Society Membership Fee 7/6

Convention Fee 7/6

All Communications : Convention Secretary,

204 WELLMEADOW RD., CATFORD, LONDON, S.E.6

The original title on this story had an 'e' for the first 'i' when Dan Morgan submitted it and we thought he had made an error in typing. However, after reading the MS we agreed with him—but have used the correct spelling herewith to save the flood of letters pointing out the 'error.'

THE HUMANITARIAN

By Dan Morgan

Flistan checked the dials again. The resonance was all around him now, vibrating the metal of the hull and pulsing through his own body, making its flexible outer covering ripple in sympathy.

Now was the time to get out, fast. Very shortly the berserk drive mechanism would reach the final point of disintegration and the Nargolian ship would blossom into a cloud of glowing, cosmic dust.

He had the lock open and was about to flow into the lifeboat when he suddenly remembered the food animals in the lower hold of the ship. The poor creatures must be panic-stricken by the vibration around them, not to mention the painful effects the resonance would be having on their fragile bodies. He could not allow them to continue to suffer, even for the short period that remained. They had no intelligence, of course, but even so . . .

He rolled swiftly back to the control room and pulled the lever that would fill the animal compartment with an instan-

taneous cloud of anaesthetic gas, releasing them from an existence which could only be a painful burden to them. It was unfortunate, but there was no room in the lifeboat for anything but himself and his survival kit.

A quick glance at the dials showed him that his sentimentality might well cost him his life. Near panic increased his body elasticity and he rushed back to the lifeboat and slammed the lock behind him.

He had hardly settled himself in the acceleration tank when the throbbing resonance gave way to the familiar grinding nausea of breakthrough. With his last flicker of consciousness he punched the button that would throw the lifeboat clear as soon as the ship re-entered true space.

Consciousness returned and with it the aching pain of strained body cells. Flistan flowed outwards on the surface of the liquid, reaching out one pseudopod to switch on the healing glow of the tube above him. He lay for a few moments, a thin sheet of pulsating protoplasm, drinking in the comfort. It would be good to stay like this, with nothing but the soothing warmth. But this was no time to relax. He rolled in on himself, forming once more into a mobile-unit and inspected the control panel of the lifeboat.

With a prayer that the information base had given him was correct, he punched the firing keys and headed in for a landing on the night side of the planet. Grouped clusters of lights showed that it was at least hospitable enough to have produced some kind of intelligent life.

Squandering his last ounce of fuel in the process Flistan landed his ship on the side of a hill near one of these cities. Then he activated the homing beacon which would guide the rescue party to him and commenced his investigations.

The air was breathable, if a little low on oxygen, and free from any parasitic life which his adaptable body would not be able to withstand. Overhead the sky was strangely empty compared with the crowded star clusters of his home world ; but this deficiency was more than remedied by the presence of a large satellite which shone with cool, symbolic beneficence.

He became suddenly aware of the fact that he had not fed for over a hundred periods. He rolled thoughtfully across the small cabin towards the cupboard which contained the emergency food rations. It would be poor quality, processed stuff, only

fit for bare survival. He thought with a pang of regret of the food animals who had perished uselessly along with the ship.

Flistan wondered how long it would be before the rescuers arrived. Even if a ship was already on its way from Nargol it would take at least five hundred periods to reach this out-of-the-way corner of the galaxy. He reached out a pseudopod and unfastened the door of the food cupboard unenthusiastically.

Flistan's entire flexible outer cells quivered with rage. The cupboard was quite empty, except for a small canister of drinking liquid in one corner. Someone at base stores would suffer for this when he returned.

When . . . Flistan made a quick calculation. He was a fully grown, robust specimen of Nargolian beinghood, with a correspondingly large appetite. If necessary he could remain alive for perhaps three hundred periods. But this would necessitate the absorption of some of his own body tissues—the thought was distasteful. And after that . . .

There was only one thing for it ; he would have to leave the ship and explore this world further. If he could find just one food animal before his mobility was sapped by starvation he would be able to survive until the rescue ship arrived.

He rolled out of the open lock onto the grassy surface of the moonlit hillside. Strictly speaking he was not authorised to make contact with an uninvestigated civilisation—there were heavy penalties for that sort of thing. But this was surely an exception. He could not be expected to starve himself when only a short distance away lay a city, built by the intelligent inhabitants of the planet. If they had reached such a state of civilisation they must be culturally ready for contact. The chances were that in this type of environment they would not be physically unlike his own race, living on the same kind of food. It would be foolish to remain in the lifeboat and starve. Even if there were minor physical differences, if they had adopted some other conventional mobile shape than that of the Nargolians, he felt confident of his ability to produce a passable imitation. Life sculpture had always been one of Flistan's favourite hobbies.

Some distance away he noticed a group of strange looking creatures. Experiencing a thrill of anticipation he rolled cautiously towards them.

He was only a few feet away when the nearest creature turned and surveyed him for a moment with two luminous eyes. Then with a bellow of fear which alarmed the others it started to run away from him . . . *on four legs*. Flistan watched the panic-

stricken flight of the group, making no effort to follow. He marvelled at the clumsy appearance of the animals and wondered what possible use the intelligent beings of the planet could have for them.

The question was of no pressing importance. He continued his downward progress towards the lights of the city.

George N. Beadle thrust his way into Mackeson's Dining Rooms and closed the door behind him with his customary slam. He was a big-built, muscular man, with a squat, ruddy face which nestled between bulging shoulders practically without the intervention of a neck. His flat head was crowned by a black crew-cut of brutal severity.

"Evening, George. How's the butchering trade?" asked the freckled-faced, balding man behind the counter.

"Lousy!" snarled Beadle, showing a mouth full of large, white teeth. "People just don't appreciate good meat any more. They want all this tasteless frozen muck—horrible dried-up little chickens and stuff like that."

"No good for you, eh, George?"

"You're dead right, Mac." Beadle leaned over the counter, a look of anticipation on his ugly face. "You get that piece of rump I sent down this afternoon?"

"It's over there in the fridge," replied Mac. "Now there's a piece of real stuff. Shall I cut you off a slice now?"

"Slice? *That's* what I call a slice," Beadle said.

Mac walked over and opened the door of the fridge. "You certainly are a good advert for your trade, George." He held up the great, ruddy hunk of steak admiringly. "How would you like it done?"

"You don't have to ask *me* that," said Beadle, in his coarse, bragging voice. "*Blue*—just show it a dry hot pan for thirty seconds, then a quick flip over under the grill." His voice took on a new tenderness and his eyes misted slightly. "I want it done just so the blood runs out when I cut through it."

Mac nodded and started to busy himself with the preparation of the steak. "French friend with it—or onions?"

"Neither," Beadle said. "Meat like that deserves to be eaten on its own—you should know that. Just a slice of white bread to soak up the blood is all I need." He leaned his chin on his palm and watched the activity behind the counter expectantly. Eating to George Beadle was as liquor is to an alcoholic, a source of untold satisfaction and interest. For him, his working hours

were just an interval between one meal and the next. Life, thought, happiness, all these had their central motif of grinding molars and active salivation.

And best of all, George liked his steaks—thick, blue ones.

The steak had been consigned to the glowing grill for the second time and Mac was waiting ready poised for the exact moment in which to snatch it forth and slap it sizzling and smoking on the counter in front of George, when the door of the Dining Rooms opened again.

Both Beadle and Mac looked round curiously, half annoyed. *Nobody* ever came into the place around this time. It was just after half-past ten ; the evening dinner rush was over and Mac would soon be swabbing down the counter and cashing up for the night. Beadle always arranged it that way, so that he could carry out his devotions with only the acolyte Mac as a witness. Eating was too important to be interfered with by such stupid worldly things as music and conversation. An occasional grunt, a sigh of appreciative fullness, perhaps even a burp—but no conversation.

The newcomer, a pale, harrassed looking man wearing a very shiny blue serge suit, stood for a moment in the doorway like a rabbit at bay. Then, apparently gathering courage, he walked with a curious undulating awkwardness towards the counter. He stood for a moment surveying a stool as if wondering at its function, then looked briefly at Beadle and seated himself in an identical pose to that of the big man.

"Evening." Mac moved along to face the newcomer.

Recovering from the momentary interruption of his concentration Beadle's small, red rimmed eyes glared over at the smoking grill. "Strike me, Mac ! What do you think you're doing—making a burnt offering ?"

The cook closed his mouth in the very act of asking the newcomer for his order and dashed over to the grill. He whipped the steak out from under with his bare hands and slapped it onto the waiting plate. "Sorry, George," he muttered apologetically as he placed it in front of Beadle.

Beadle poised for a moment, darted a look of resentment at the intruder, then plunged his knife into the meat. The delay had been fatal. No oozing redness greeted the intrusion of the knife. The steak was over cooked.

He commenced to slice it with slow exasperation, placing the pieces in his mouth with methodical regularity. The growing

anger within him must await its fulfilment until the main event of his evening was completed.

Aware of the impending storm, Mac eyed Beadle for a moment warily then returned his attention to the stranger. "What'll it be, mister?"

The little man jerked confusedly out of his close observation of Beadle's attack on the meat. "Oh, er, a cup of . . ." he seemed to be casting around for his words. ". . . coffee," he concluded at length, and looked back at Beadle.

"And?"

"Nothing else at the moment, thank you. I'll be eating . . . later."

Mac flung him a look of contempt and walked over to the coffee urn.

Beadle swallowed noisily. "Probably one of those darned vegetarians." He placed another hunk of meat in his mouth. "You won't serve anything fancy enough for his lordship in a place like this. You know, one of those cranks who talk about it being cruel to kill the dear little animals and eat them. God's creatures and all that junk. I was reading something about them in the paper only the other day. Makes you sick the way they carry on. Who's got us where we are today but the meat eaters? I ask you—where would we be if our ancestors had thought that way? We'd still be a pack of ruddy monkeys, that's what."

Mac's light-coloured eyes flicked from one to the other of his two customers. If the little man knew what was good for him he would get out right now, before Beadle had finished his meal.

"One cup of coffee—sixpence." He placed it clumsily in front of the stranger, sloshing the brown liquid into the saucer with practised affrontery.

The little man hesitated for a moment, then produced a coin from somewhere. Mac did not remember having seen him place his hand in his pocket. He picked up the sixpence; it had a strange slippery warmth about it and it seemed to pulsate in an extremely unpleasant manner between his fingers. He slammed it in the till hurriedly.

"Stands to sense," continued Beadle. "Animals eat each other, and we eat them. Law of evolution. Meat is the natural food, so why mess about with a lot of blinking roots and leaves and stuff?"

"Do you really mean that?" asked a soft voice.

Beadle stopped chewing, his mouth half open. The small stranger was standing at his elbow, looking earnestly up into his eyes.

"Course I mean it—*why?*" Beadle's heavy jaw thrust forward aggressively.

The stranger stood his ground. "Oh, nothing, it's just that I find your point of view interesting. I have argued with myself that it is the law of nature that animals should eat other animals and that any incidental suffering or loss of life is unimportant. But there *are* other ways of looking at it, you know."

Beadle tore a lump of bread and wiped some of the congealing fat from the edge of his plate. He had the feeling that in some obscure way he was being bested by this quiet little man.

"Well? Are you going to tell me I'm wrong?" he asked menacingly.

The stranger's features seemed to quiver slightly and a tremor swept downwards through his entire body. "No . . . I just wanted to hear you say it . . . To make quite sure of the way you feel."

Beadle swallowed the last morsel of the steak. Not bad, not bad at all. Overcooked, yes, but the flavour had still been there. A good piece of meat, too good to be spoilt by Mac's clumsy handling, fortunately. "Well, you heard me—satisfied?" He hefted his bulky body off the stool. He was feeling magnanimous and there was no sense in spoiling the progress of his digestive processes.

"Yes, quite," said the stranger, smiling for the first time.

Beadle glanced across at Mac, then lifted his eyes to the ceiling expressively. "Meet them all the time don't you?" He sucked his back teeth noisily and made for the door. "See you tomorrow, Mac. I'll bring you round some stuff in the morning, O.K.?"

He was halfway across the street when he heard the door of the Dining Rooms open again. Vegetarian loonies!

He walked through the gates of the park, savouring the pleasant fullness of his stomach. It was a cool, moonlit night, and the shadows of the trees made a pattern on the gravel drive which lay ahead of him. Beadle always enjoyed this nightly walk home after his meal, it gave him time to plan for tomorrow—to contemplate meals yet to come.

The trees were thicker as he neared the centre of the park and it was quite dark. He strolled along, humming tunelessly to himself. There was a slight slithering sound behind him. Some animal, a cat perhaps, disturbed by the intrusion of a human being in his night world. On through the darkness;

only a couple of hundred yards now and the lights of the street where he lived would be in sight.

The slithering sound came again. Louder this time—and closer. The short hairs at the back of Beadle's scalp tingled. He turned swiftly, suddenly filled with an inexplicable fear. A rolling blackness that was darker than the night rose up to meet him. A scream bubbled briefly in his throat as he was engulfed.

Flistan rolled slowly back up the hill towards the lifeboat. It was good to be back in his own mobile form again. The effort of maintaining the biped shape and at the same time compressing his body cells to the smaller dimensions had been a strain. But now all was well, the ingestion of the food animal would mean that he could await the arrival of the rescue ship in comfort.

Strange that food animals should have become the dominant life form on this planet. He thought sentimentally of his own little brood who had perished in the wrecked ship. Although they were identical in form they were lacking in even basic communication techniques.

The discovery that the bipeds of this planet were in fact a highly intelligent race had presented Flistan with a most uncomfortable problem. He was a sentimentalist and could not bear the thought that his own gross appetite might be the cause of the blotting out of the existence of an *intelligent* being. In fact he had almost resigned himself to the idea of starvation—until he had gone into the eating place and met the big, clever food animal who had been kind enough to explain to him the logical order of nature.

Flistan rolled into his sleeping tank and spread himself luxuriously—thinking kind thoughts of George Beadle . . .

Dan Morgan

Most of John Brunner's recent short stories have been appearing in our companion magazine Science Fantasy. It is pleasant, therefore, to welcome him back to this magazine with a delightful story based upon a world governed by automation, where the computing machine reigns supreme and doesn't often go wrong !

OUT OF ORDER

By John Brunner

His name was Caiaphas Euphues Delorny, which indicated that he was probably forty-six years old, that being the period elapsed since the last fad for first-century costume, Amanda Ros and Lyly. He wanted two thousand type eighteen-A paraphrators, a device as specialised and difficult to comprehend without the background as a klystron or a waveguide tube. Broadly speaking, it was a means of assessing the average information content in a work of art according to a scale of meaningfulness applicable to all intelligent species, and the only people needing one were in C.E. Delorny's line of business—digesting cultural achievements for the benefit of other planets.

All of this was of no consequence except that he hadn't got the paraphrators and he was due to digest the Egyptian section of the British Museum for the inhabitants of Nu Tauri III this particular Tuesday morning. So he went to the nearest pay-screen and flipped Supply Central. The duty technician didn't much like Delorny's round, red, irritated face. He yawned.

"Why haven't you sent me the paraphrators I asked for?" demanded Delorny loudly.

The technician took his feet off his desk and went into the standard reply. "Friend, we deal with twenty-two million people in Greater London," he said. "Everyone makes about six orders a day. Nonetheless, Supply Central keeps careful track of all of them and sees that they are filled on time. Now suppose you take another look in your delivery chute?"

"I did," said Delorny, purpling. "Here—look!" He waved a requisition duplicate at the screen. "Two thousand type eighteen-A paraphrators—deliver to British Museum chute nine at ten a.m. today. I filed that order Saturday. They haven't turned up."

"Hold that duplicate still," requested the technician, beginning to take an interest. The official stamp of acceptance in the credit-available space was correctly dated the previous Saturday. Even if there hadn't been a paraphrator on the planet at that time, two full days was plenty of time to have them built.

"That's very odd," he admitted.

"Odd be damned!" said Delorny. "It's costing me credits! I'm supposed to have a million spools of microtape on the Nu Tauri express by this time tomorrow, and I'm standing around doing nothing."

He waited, fuming, while the technician noted the number of the application and punched it on the state-of-action panel. The white eye that winked up at him signified that the order was not recorded in the memory banks.

The technician stared. At length, swallowing, he went back to the screen and said apologetically, "There doesn't seem to be a record of your order. If you—"

He was on the point of inviting Delorny to file a fresh order through the direct facilities in the service room he was talking from, but he had barely depressed the verbal-accept key and noted that the time was ten-zero-seven hours Terrestrial Null Time, when Delorny lost his temper.

"No, Mr—uh—Crodnobegorthskvk," said Harding desperately. "You misunderstand our function. We don't actually *build* supply centres. That's a gigantic undertaking. We design them and detect faults, if any, in their working, just as an architect designs houses without laying bricks or moulding plastic himself."

"My name is Crodnobegorthsk'vk," corrected the Platonian on the other side of the desk bluntly. "You mispronounce it.

Besides, what have your houses to do with it? We are not weaklings comparable with you." He shrugged his four-ton carapace in a gesture that made the walls creak. Harding could see his point. The storms of Plato often hit four hundred miles an hour at the surface but the inhabitants were as little bothered by that as Earthmen by a cool breeze.

"All right," conceded Harding. "We'll leave houses out of this. But I still don't quite follow what it is you expect my firm to *do*."

With an air of infinite patience being strained to the limit, Crodnobegorthsk'vk answered, "At present an average of four-tenths of a lifetime among my people is spent in collecting, distributing and absorbing quantch. From my study of your economy, I think a device similar to your supply centres might reduce this to three-tenths or less, leaving more time available for activities which are less monotonous and pleasanter."

"Such as?" Harding asked feebly.

"Pretonsuling and incoblapsimine, among others." The Platonian spoke unblinkingly. He had unusual flat eyes.

"Um." It was the best Harding could manage. He picked up the note on his desk and read it again. Well, it was very nice of the Minister of Trade to say that since it was in Terran interests to get this order he preferred to put the Platonian on to Harding, Harding and Lal Inc. But—what did they *need*?

"I think the best thing I can do for you, Mr. Crodnobegorthsk'vk," he said with exaggerated care, "is to take you over the London installation—Supply Centre—which we designed. It's the biggest on Earth. Then, if you think it could be adapted to your needs, you can tell us."

The Platonian agreed with a slight nod of his carapace. "Fine," said Harding with an effort. "Uh—oh, excuse me." He bent to the desk viewer and touched the come-in stud.

"Yes, Sita?"

Sita Lal's pretty face was set in a grim expression as bad as any he had seen on it; he guessed that she'd torn a new sari or something. Thinking thus, it took him fifteen seconds to absorb the information she tossed him.

"Supply Central has lost an order, Ralph—and they're after our blood."

"Impossible!" was Harding's only reaction. Crodnobegorthsk'vk stared at him, and he caught himself. "No, of course if they say it's happened, it must have. How? What order? When? Where?"

"Delorny—you know, the cultural digest man—filed an application on Friday. The stuff didn't turn up. We've promised all sorts of rash things—we've had to guarantee the cost of two thousand paraphrasters in case they turn up after all, and who'd use the damned things but a cultural digest man? What will *we* do with them? Ralph, things like this just can't happen!"

"The—uh—the principle of administration of Supply Central probably wouldn't concern you," said Harding, trying valiantly to keep up a brave face under the level and unvarying gaze of Crodnobegorthsk'vk's flat eyes. "It can be adapted to suit the locality. London's was designed by us especially so that it could expand with the city, whereas New York Island's for example, is static owing to the population actually dropping slowly."

"Why?"

"The more things people own, the more room they like to have around them, and New York Island is not elastic."

"What is it?"

"Rock and—*that's not important.*" Harding sneaked a glance at his wrist visor, wondering why no one had slapped a come-in beam on him. Probably no one had realised the true magnitude of the disaster yet.

What it in fact amounted to, though, was this: the entire structure of the planet's economy was in danger. It had been turned instantly from completely reliable and satisfactory to wholly unreliable. Unless the error could be proved to be an eliminable fault, they would have to start over.

"And that'll mean wars and slumps and—"

"I beg your pardon?"

Harding started, and found that he had been muttering to himself. "Just thinking aloud," he apologised. "Saying nothing of any interest to you." The visor bulb flashed; he flipped the switch and said to the caller, "I'm just waiting for a car, and then we'll be right with you, Mr. Hoopcock. I'm certain there can't be anything seriously wrong."

"There hadn't better be," said Hoopcock ominously, and broke the connection.

"Mr. Hoopcock," Harding explained as he and the immense Platonian were dropped eight hundred feet to the sub-street expressway level, "is the nominal supervisor of the Supply Central system for the London County Council. In actual fact, of course, such supervision as is necessary is done either by

specialist technicians—forty-one of them—or the machines themselves."

"How is that possible?" said Crodnobegorthsk'vk. Harding found himself answering almost the identical question in very similar words less than fifteen minutes later, under Hoopcock's stare. This, he noted, could be almost as baleful as the Platonian's.

"This is only a preliminary routine unofficial inquiry," said Hoopcock rapidly and loudly for the benefit of the four people present besides himself and the record. "All right. People who know less about the Supply Central system than we do will have to listen to the tape, so I'll insist on very full details of everything. Bucknell, the whole thing starts with you, I gather."

Bucknell, the technician who had received Delorny's complaint, agreed. He told his end of it and submitted the duplicate of the lost application for scrutiny.

"Is this in order?" said Hoopcock. Bucknell nodded.

"In fact, we used the same data for a pilot run in a blind circuit, and it worked perfectly. Nonetheless, the first thing I did was check for the memory of the order in the co-ordinatory bank, and there wasn't any."

"Why?" said Hoopcock. Bucknell shrugged.

"Supply Central sort of forgot, I imagine," he said.

"That's impossible!" said Sita Lal impulsively, and Harding tugged at her arm to make her stay seated. He got up and spoke more smoothly.

"My colleague is very nearly right," he said. "Our machines are incapable of 'forgetting'—something Mr. Bucknell ought to know," he added severely, glancing at the technician. "The self-servicing devices on them are normally perfectly dependable"

"How is this accomplished?"

"Continuous feedback. Every stage of the filling of an order is checked back against the original coding of the data. Any disagreement results in correction."

"Fair enough," nodded Hoopcock. "This is standard procedure?"

"For our machines. Some firms prefer simultaneous multiple circuits, but we find them too cumbersome. Certainly London's volume of orders would make for a machine impossibly large."

Sita squeezed his hand and whispered, "Good boy!" too softly for the tape to pick it up. It was a nice piece of anticipation against the later official inquiry.

"Right. Now let's detail what happened to this order after Mr. Delorny filed it on Saturday."

Harding spread his hands. "Assuming the credit-available panel was properly confirmed, Supply Central would have memorised it, cross-referenced the item demanded to the index of items in store, *probably* found there weren't any—"

Bucknell interjected, "'Sright. Who'd *want* two thousand of them things, anyway?"

Hoopcock glanced round involuntarily as if expecting to hear from Delorny, and then said, "Continue, Mr. Harding."

"All right. It found there weren't any in any of the local stores. That meant that a general call would have been put out to every Supply Central from which such material could have been brought before the time of delivery."

"Could you clarify that?"

"Surely. It takes roughly four hours to get any given item here from—say—Vancouver Island. If the time of delivery required was less than four hours hence, the machine wouldn't bother with sending for a consignment of the ready-made material. It'd file an order with a factory."

Harding leaned back against the wall and stared at the round ball of the microphone. "In this case, I assume Supply Central drew a blank everywhere on Earth, because there was plenty of time for delivery. Two clear days, in fact—Sunday and Monday"

Hoopcock looked up. "The order was filed when?"

"Twenty-three-twenty-one Saturday. Okay. So the order went out to a factory—"

"Only it didn't," said Bucknell bitterly. "If it had there'd be a record of it. Supply Central just never heard of any such order." He sounded helpless.

"Let's carry on with this ideal procedure," requested Hoopcock. "We've got the order to the factory. Then—?"

"The factory's memory would be used to estimate the time needed to fill it. If this meant defaulting on the delivery time, then the applicant would be notified and given a chance of either postponing the delivery time or cancelling the order."

"In this specific instance, would either of those things have happened?"

"Lord, no! Two full days is enough for practically anything within reason."

"Define *within reason*," requested Hoopcock.

"Any quantity of any item which any single person or group of people might expect to make full and immediate use of," said Harding thoughtfully. "Supply Central couldn't produce you a fleet of faster-than-light spacecraft in two days, for example. You couldn't afford them, as a start. But a new 'copter, or a suite of furniture, or a kitchen—that's easy."

"How long would a paraphrator take to make?" Hoopcock looked at Bucknell.

.. "Hayes Electronic's master brain has fourteen minutes as the scratch requirement," Bucknell answered. "In fact, even though the things aren't commonly in use, most of the factories already have the specifications memorised. That cuts it. Say—ten - twelve seconds?"

"Then what does the longer time involve?"

"Programming the brain to build the machines to build the tools to build the paraphrator," supplied Harding swiftly. "After that you just keep going."

"All right. And how about delivery?"

"Place of delivery is either specified or assumed to be the same as place of application. In fact, chute nine, British Museum and the Museum's screen number, were correctly filled in on the original order." Bucknell sounded sad.

Hoopcock waited an impressive moment. "All right," he said at last. "Harding, your firm designed this entire outfit. I've already ordered all our staff to look for the fault, but that's not our business. It's yours. Go and find what's wrong!"

Harding wondered whether incoblapsimine was as pleasant as holding hands with Sita. Usually he liked it. The Platonians' flat-eyed stare took half the fun away. They were both aware that Hoopcock's door-slamming departure could be the first stage of ruin for the firm.

Assuming confidence, he let go of Sita's cool fingers and turned his back on Crodnobegorthsk'vk. "Okay," he said to Bucknell. "Let's go!"

So they went; away from the cool, high, airy office in which Hoopcock exercised his sinecure right of supervising the forty-one technicians who supervised the great complex which had never really needed supervision before. Strictly, Harding kept reminding himself, the odds were all in favour of it *not* having gone wrong after all.

They came into the main hall where the blue-overalled technicians were quietly at work, checking all the master circuits

and finding them in order—or apparently in order. The hall was four miles long and consisted of eighty-eight parallel banks of memory cells and transmitters which both received instructions from outside and forwarded them to the storehouses and factories from which almost every conceivable requirement of Greater London's gigantic twenty-third century population could be met.

Usually Harding and Sita looked on the hall with pride. This time, though, they realised for the first time the complexity of it as it would appear to someone who was not expert in the cybernetics field.

"What *could* have gone wrong?" said Harding under his breath. Sita shrugged and turned her luminous dark eyes to him.

"Ralph, we designed it so that *nothing* could fail!" she answered, logically enough. Bucknell gave a snort of amusement, and she turned on him. "Right! For that, you can come help me check the monitor circuits."

They walked slowly away into the brightly-lit room. Harding watched them go thoughtfully. A noise—perhaps the alien's equivalent of a polite cough—from Crodnobegorthsk,vk aroused him.

"Has this been functioning long?"

"Uh—no. Four years. It was our first really big project," Harding told him absently. "Before Supply Central started up, the system was like that of the old telephone exchanges—relied on human beings as links in the circuits. That proved too slow and unreliable—"

"How so?" The Platonian sounded a little superior.

"People have to be trained to do the work," Harding said, nettled. "Likewise, they occasionally fall ill, or operate below maximum efficiency."

"I understood that *this* was a case of operating below maximum efficiency," said Crodnobegorthsk,vk pointedly.

Harding acknowledged the jab reluctantly. "There's only one thing that could have happened," he admitted. "That's for a whole series of mistakes to have occurred at once. The initial error would have had to be masked; the feedback circuits which check and correct the transmission of data would have had to slip just enough not to ensure the maintenance of the record in the memory banks—"

He grew aware that this was the worst type of sales talk to let the Platonian hear. "Well, at any rate," he said with forced brightness, "now you'll see how quickly and thoroughly we can check the entire set-up."

Twelve hours later, he pushed hair wearily out of his eyes and grew aware that Sita was tugging at his arm. He turned his head.

"Yes?"

"Master information banks checked out. Monitor circuits checked out. Feedback control checked out. I've got six teams of technicians going over the landlines between here and the place Delorny filed his application from, but the input is functioning normally again now if that's where it went wrong." Sita pushed with her foot at a square slab of *something* on the floor; it surged and sagged and tried to get up, but the effort was too great.

Harding stared at it. "What in the name of the Horsehead Nebula is *that*?"

"It's the most complex job we could think of for the circuits to handle as a control run," said Sita gloomily. "I told the machine to produce a viable artificial life-form adapted to Terran conditions in half an hour without recourse to previous attempts. That's what it came up with."

The lump of something burped in a vulgar fashion and wriggled obscenely. After a pause it parted down the centre, and there were two of it.

"So viable it even reproduces," she added in a tone of the deepest despair. She tossed it a piece of the ham sandwich she was carrying; the nearest segment oozed over it and absorbed it.

"I'll have to have it destroyed," she finished, "or the place will be over-run."

Dismissing the thing from his mind, Harding twisted on his stool and put his chin in his palm. "And that order is recorded in the memory banks?"

"All of it." Sita showed him a spool of memory tape; it was dotted down its half-mile length with the symbols indicating transmission of information. "It took that much doing, but every last bit is memorised."

The two lumps of organic material on the floor burped in swift succession and divided; disgustedly, Harding signalled a scavenging robot and had them taken away. Heavy footfalls could faintly be heard, indicating the Crodnobegorthsk'vk was on his way back from his once-daily trip to collect, distribute or absorb quantch, whatever that might be. As the alien's four-ton bulk thundered slowly nearer, he got up.

"Well, I'm getting nowhere," he said folding circuit diagrams and schematics into a random stack. "I'd better go and have a talk with Hoopcock."

The civil servant wasn't in much of a mood for talking. It was probably the first time in his career that he had been on the job at eleven at night, and his temper was not at its sweetest.

"Any results?" was his brusque demand, and Harding shrugged.

"Negative ones. At least we've eliminated the places where an actual breakdown might in theory happen."

"This isn't theoretical," snapped Hoopcock. "We had an emergency meeting of the County Council this evening, and it seems that there's a failure clause in your contract—"

"Don't I know it!" said Harding.

"Well, Sir Richard Upton-Carvel isn't any too pleased, I can tell you. You know he was strongly for the building of Supply Central when he was Lord Mayor, and it'll be held against him if you can't put this right. He's been working like mad to have a charter granted to his group and form a Worshipful Company of Electricians, and this could be the permanent setback he's afraid of."

"For heaven's sake!" said Harding. "Stop talking as if London was without services! Four years of trouble-free operation of an installation that's twice as big as any other on Earth, and you make out that the stars are falling. Fifty years ago, such a set-up couldn't have been run for four *hours* without a breakdown."

"True," admitted Hoopcock. The visitor's buzzer on the door sounded, and he pressed the release which opened the sliding panel. Crodnobegorthsk'vk put his enormous head through.

"Ah, Mr. Harding," he said mildly. "They told me you were here. I just wanted to congratulate you."

Taken aback, Harding stumble-tongued.

"I was in my hotel room a little while back, and I felt that I would like some strenth."

"Strength?"

"*Strenth*—a delicacy my people are fond of," explained the Platonian. He seemed mellowed by something. "So I filed an application for some with your Supply Central, and I can assure you that even if your devices are no good for collecting quantch, the brand of strenth you supply will alone justify our obtaining some. Hic!" he added rather inconsequently.

"Well, that's wonderful!" said Harding, cheering up. "Uh—but why in particular?"

"Because though the strenth I got here is nothing like what I'm used to, it was delicious. *Hic.*"

Hoopcock and Harding exchanged astonished glances. Then there was a four-ton thud, and Crodnobegorthsk'vk measured his very considerable length on the floor.

"What—?" began Hoopcock, and Harding cut him short.

"I can guess," he said grimly, and went to the screen in the corner. Rapid flipping brought him in Information Section at Supply Central.

"During the past few hours a request was filed for strenth," he told the surprised technician on duty. "That's something used by Platonians. It's almost certainly the first time it's ever been asked for on Earth. Get me details."

He waited impatiently for the few moments it took the man to find the reference. When he returned to the screen, he was studying a spool of memory tape.

"Yes, here you are," he said. "Application filed two hours ago. There was no data in the tank, so the master requested further information, and got the reply that it was used to make Platonians feel good."

"Thanks," said Harding dismally. He cut off and turned to Hoopcock, who was glancing alternately at the prostrate Platonian and at Harding himself.

"No wonder the strenth was delicious! That being is probably full to the eyes of the most powerful euphotic Supply Central could synthesise for his metabolism!" He eyed the fallen alien doubtfully. "Will he have a head in the morning! Or wherever Platonians do get hangovers, anyway."

"What shall I do with him?" said Hoopcock.

"Oh, send for a crane and have him taken home," Harding told him, clambering over the hard shell in the doorway. "I'm going back to work."

"That's another complaint we've got coming tomorrow," Harding informed Sita. "Oh well—Platonians' hangovers aren't really our business. Let's get on with it."

They sent out for black coffee and two hundred capsules of Neverdrowse, and kept on the job. The night rolled away from the British Isles, and still the technicians checked, rechecked and double-checked.

"No dice," said the team who'd been over the landlines to the point at which the errant application was filed.

"No joy," said Bucknell on his return from the filing acceptance system.

"Not a thing," said Sita and Harding in simultaneous annoyance, and went for breakfast.

"Even if the memory banks, for some reason, failed to bring up the construction data for the paraphrators," Harding explained to the irascible Hoopcock when he dropped in at five to nine, looking puffy with lack of sleep, "the other available information should have enabled it to pass specifications to a factory with floor space free and maybe invent the damned thing all over again. The machines can do that, you know—look at that strenth of Crodnobegorthsk'vk's—"

"And that ghastly creature it invented for me yesterday," put in Sita.

"Only it didn't do that," said Bucknell flatly. "I made sure."

Absently Harding split a capsule of Neverdrowse and poured the white powdery contents into his cup of orange juice. It proved undrinkable, and he set it down after the first sip.

"Well," said Hoopcock, shrugging, "all I know is that, unless the fault is traced before ten hundred hours, there's going to have to be a public inquiry."

Sita looked at Harding. "If there's one thing certain," she said in measured tones, "it is that Supply Central is working perfectly right now. I think the error cropped up somewhere else."

"Well, what have we got left?" demanded Bucknell.

Harding slammed his hand down on the table and got up. "I'm going down to the British Museum," he said. "That's the only possibility."

They all went, as quickly as they could make it. Inquiring for chute nine, they wound up in the Egyptological Department among hieroglyphs, stelas and mummies, none of which were of any interest, and here found Delorny already at work, supervising his complex abstractors and recorders.

"Excuse me," said Harding politely, and Delorny swore and shut off his tapes.

"Yes?"

"About those paraphrators for which the order went—"

"Oh, those. Don't bother me for a moment—I have to get this through by noon."

They waited patiently for a few minutes. Then Delorny, his face redder than ever, came back to them. "All right. About these paraphrators. You realise you might have cost me millions of credits? When I think—"

He obviously had been thinking ; Harding found himself hoping that his irritation hadn't found its way on to the digest tapes. Delorny had been giving them pieces of his mind for fully two minutes when a young woman in the attendant's uniform of the Museum came up and coughed politely.

" Mr. Delorny ? "

" Yes ? " The abstractor broke off.

" There's a parcel addressed to you at chute nine," said the girl. " We'd like you to collect it, because it's rather bulky—"

In complete silence they walked over to the chute. Harding bent to read the neat printing of the superscription on the package. " Two thousand type eighteen-A paraphrators," he said with a feeling of relief so powerful it was alarming.

" Don't tell me we've been on a wild goose chase ! " said Hoopcock prayerfully, and Bucknell shouldered forward.

" No ! Even if the order was filled, the memory banks ought to have the record of it." He felt in his pocket and took out the duplicate of the original application. " This is a different serial number," he announced after comparing it.

Harding pushed across to the screen beside the chute. Flipping for Supply Central, he framed his question. " Why isn't order twenty-nine million, four hundred thousand sixty-four H recorded ? " he demanded.

" Cancelled owing to subsequent revision of delivery date," came the answer in the sweet recorded tones of Supply Central.

" That's nonsense ! " said Delorny brusquely.

" Mr. Delorny, what did you say to Bucknell when he answered your complaint ? And why did you complain ? " asked Harding.

Delorny blustered. " There was no such package delivered for me yesterday morning, so I said I wanted it filled in a hurry. Immediately ! "

Sita tore off the label and showed it silently to Harding, pointing at the date of arrival.

Weakly, Harding muttered, " Oh, *no* ! Bucknell, what did Delorny actually say ? "

" He said he wanted the paraphrators—and he wanted them—he *wanted them yesterday* ! " Bucknell gaped. " And I'd put down the verbal-accept key at my end—"

Harding grasped Sita's hand in silent glee. " I'm afraid you'll have to call off your public inquiry, Mr. Hoopcock," he said. " Supply Central has fulfilled its orders to the letter. Even we didn't know it could do this ! "

"You—you mean—" stammered Hoopcock.

"I mean that when Mr. Delorny said he wanted his stuff delivered yesterday, it was already waiting in the chute, having arrived on Monday as ordered. Now all we have to do is figure out how it was done."

Heavy footfalls broke the stunned silence. After a while Crodnobegorthsk'vk's gigantic head poked tentatively into the room. Harding looked at it and drew a quick conclusion. Returning to the screen, he flipped Supply Central again.

"I want several quarts of something to counteract the after-effects of strenth on the metabolism of a Platonian," he said. "And that alone, I reckon, should justify those people investing in one of our machines."

John Brunner

THE LITERARY LINE-UP

If you think you have met most of the thrills in Ken Bulmer's serial "Green Destiny" in the first two instalments let us hasten to state that there are a lot more to come in the concluding chapters next month. With some unprecedented surprises, too.

Lan Wright returns with a novelette—you will remember that in "Fair Exchange" (No. 31) and "The Con Game" (No. 40) the machinations of Hendrix and Dawson of Earth double-cross the Lutherians. The sequel "All That Glitters" neatly ties up all the loose ends and provides a fitting climax to the trilogy. American author, Bob Silverberg, voted the most promising new writer of 1956, makes his debut in our pages with "Quick Freeze" and both John Boland and E. R. James will be present with short stories.

Story ratings for No. 55 were :

1.	Build-Up	-	-	-	-	-	J. G. Ballard
2.	Royal Prerogative	-	-	-	-	-	Arthur C. Clarke
3.	Patrol	-	-	-	-	-	James White
4.	And Earthly Power	-	-	-	-	-	Lan Wright
5.	Thirty-Seven Times	-	-	-	-	-	Alan Guthrie
6.	Prodigy	-	-	-	-	-	Nita Polinda

POINT OF CONTACT

When dealing with any race of people there must always be some focal point upon which mutual trust can be based before complete understanding can be attained. With an alien culture the difficulties are likely to be insuperable—but somewhere there will be the one action or deed which will be the centre-pin for further negotiations.

By John Kippax

Dollan the quartermaster, the business of supplies constantly on his mind, spoke his line like the tolling of a bell.

"We canna stay more than a week."

Commander Knightley screwed up his mouth and put a few more wrinkles in his leathery face as he grimaced at Anderson, the ET life specialist.

"No more to say, eh?"

Anderson, balding, thick spectaclad, thirty-five, was nudged by the short beefy Gale, his psycho friend.

"Would have been better for the men if we'd got back into space a month ago."

"You worried about the men, Gale?"

"The inaction's getting them down, sir."

"I know," said the Commander. "Fights and rows."

Anderson glanced out of the big yellow tent at the golden sun in the rich mauve sky and said, "It would be a wonderful place, Lemnos III."

"Where every prospect pleases, and only Lemnosians are vile," grunted Gale.

Knightley drummed his fingers, and the rest of the officer and officer grade personnel of the *Oberth* scuffed their feet at the grey-green turf on the tent floor, and smoked, and waited for the conference to end.

Knightley said, "I told Earth base long enough ago that they were wrong in accepting such a low standard of general duty man. That's part of the bother. But some of you, civilians particularly, could help in discipline by not calling your personal servants by their nicknames or Christian names."

"Bingo," muttered Anderson to himself. He means Gale and me, he thought.

"Well gentlemen, if we fail, and it seems that we have, we have the consolation of knowing that keeping the rules of the Charter is the sole cause."

No one spoke; from some way off a recorded bell note tolled the hour, echoing over the camp of yellow tents, with the bulk of the *Oberth* towering beyond. Inside the tent they stirred, Knightley reached for his cap, Gale passed Anderson a cigarette.

"Watch the discipline gentlemen," said the chief. Then he gave dismiss, and the blue-overalled figures left for their tents or for the ship.

Gale watched the long figure of Knightley stride away, then he said, "Let's go see Bingo about a cup of tea."

Anderson laughed.

"You mean crewman GD, Bingley, Augustus Henry," he reproved, as they walked down the rows of tents. The camp was set within a crescent-shape of trees, on the side of a long sloping down. Higher, and beyond the trees, stood the ship, and below the camp the ground fell away to a shallow valley where ran a slow wide river through clumps of golden brown trees. Down here, in a deep cleft near the valley floor lived the nearest Lemnosians. Beyond, red and purple hills stretched out under the great warm sun.

When they reached their tent they flopped on their beds, lit fresh cigarettes. A few seconds later a small sharp eager face looked through the flap.

"Two teas coming up, gents."

"Right, Bingo."

"Thanks, Bingo."

The head disappeared. Gale looked hard at Anderson.

"Discipline, Glen."

"Umph," said Anderson. "Unnecessary familiarity."

Bingley breezed in and set down two cups of tea, after which he looked up as though expecting to be praised, like a pup that had brought in a rat.

"Thank you, Crewman Bingley," said Anderson.

"You may go, Crewman Bingley," said Gale.

"Gor!" said Bingley. "You gents feel all right? What have I done?"

The silence was rather painful. Bingley broke it.

"Do we get started on exploration, or do we leave here?"

Gale said, "The Charter does not allow us to put down a bore or take a specimen of any kind until complete understanding with the inhabitants is reached."

Bingley said, "So it's space and home and payoff?"

"Probably." Anderson studied the sudden misery on Bingley's face.

"They say that unclassified men like myself—" began the little servant, then he shrugged and left the tent.

"He doesn't want to go back to being a video vaudeville turn," said Gale. "Ten week's juggling a year, that's all he used to average."

"Jugglers!" said Anderson. "We do get 'em."

Bingley whipped back into the tent. He quivered.

"We're being watched from the wood!"

They got off their beds.

"From the wood—you peep out!"

They saw the face of a Lemnosian, brown and sharp, peering from the leaves. Then his black eyes saw them, and he disappeared. Bingley started forward as though to go after the alien, but Anderson restrained him.

"Blimey," said the little man, "that's the first time I've had a good look at a real live Lemnosian."

They relaxed again.

"One look at us," said Gale, "and he's gone. That just about sums it up. They run from us, we mustn't capture one, we can't intrude, we can't hear enough of the language to analyse it, and we know nothing of their family life except that they live in caves. Stuck, on what might well be the richest planet ever."

Bingley sighed, "Ah, well." He balanced the cups and saucers in his hand, as though wondering if he had room enough in the tent to get them spinning. "Ah, well. Back to the treadmill then."

The sky had deepened to a rich violet as Gale and Anderson came back from the mess tent. The camp glowed like a collection of yellow lanterns. They were not far from their own tent as they stopped to admire.

"Unearthly."

"You said it."

"Come on," said Anderson. "No place like earth."

He walked on, then stopped.

"Someone in our tent."

"Bingley, talking to someone," said Gale.

They moved closer.

There was a light inside the tent. Bingley was heard to say,

"Ah, go on, sing a little song for your uncle Gus."

They looked inside, and stood astonished. Sitting on a chair was a small Lemnosian, who seemed to be male, and about eight earth years old. He wore shorts and a shirt of rough brown material. One leg was bound up with a new bandage, and there was a patch of plaster on his head. He was eating a biscuit with a certain amount of nervous enjoyment. Bingley, holding a recorder microphone close to the child, looked up and grinned.

"One of their young 'uns, sir. I went into the wood—"

"Forbidden," said Anderson, "but go on."

"I found this kid lying with a bump on his head and a cut leg. Looked as though he might have been snaring, or something, and slipped."

The child was looking scared now.

"I picked him up and brought him in. He was proper amused when I did a bit of my act. I thought—"

"Did you think?" snapped Anderson. "The Charter—"

Before anyone could guess his intention, the youngster shot between Anderson's legs and out of the tent. Bingley whooped and went after him, and Anderson and Gale found themselves outside after Bingley before they knew what they were about. The wood loomed darkly.

"Bingley, come back!"

"I'll have him, sir, leave him to me!" He was a blur of dark against almost equal darkness. The broad-leaved trees above them hid the rising of the first of the Lemnos moons.

Bingley was gone. They slackened pace as the crackling of small twigs and branches ahead grew fainter.

"Discipline!" snapped Anderson, breathing hard. "It'll be a court martial for that fool. I liked him up to now."

"Listen."

The wood was quiet and velvet dark. Through the trees and nearly a hundred yards away, the lit shapes of the camp showed dimly. As Anderson looked, something stepped in front of him.

"That you, Bill?"

"I'm here," said Gale behind him.

"Then what—"

Suddenly the wood became sinuously alive. Hands grasped them, pinioned their arms, while sticky, sweet smelling pads clapped over nose and mouth brought dark nothing swiftly to their minds.

Still with his eyes shut, Anderson tried to stretch his limbs and felt thongs biting into wrists and ankles. His head ached abominably. There was a sweet smell about his mouth and nose. He cursed aloud, then opened his eyes. He was in a cave the walls of which were square hewn, and decorated with drawings and brightly coloured woven mats. The illumination came from deep troughs that ran along the bottom of the wall. There was furniture, and a bed of sorts in one corner. The cave entrance, as far as he could make out, was closed by a well-fitting door. A groan from nearby told him that Gale was awake.

"Ugh. How do you feel?"

"Lousy," said Anderson. "What happened?"

"The injuns got us. Discipline: remember?"

"Maybe *they're* collecting specimens too. Could have taken a dislike to us over that boy, though how they'd know . . . How long have we been here? Can't see my watch."

Gale rolled over into a kneeling position. "Just let me get out of this lot, and I'll be as hot on discipline as a long service Master at Arms." He shifted round. "See my watch?"

"Four and a half hours to midnight. Then we've only been here about half an hour." Anderson listened. "What's that hammering?"

"Maybe they're getting the stewpot ready."

"That's not funny."

The sound of a latch and the clump of wood on wood turned their attention to the door. Through it came a tall figure which resolved itself into a male Lemnosian, clad in rough woven clothes and moccasins. As he stood and looked impassively down at the prisoners, he was joined by three others. All carried short curved swords. They talked together in a rattling tongue, and then the first one pointed to the door. The prisoners were freed about the feet, and, stumbling with numbness, were propelled outside.

They found themselves looking down from a walkway cut in the rockface : there were many other cave mouths. The other face, across a kind of village street, was similarly pitted. At intervals the street was illuminated by the glowing troughs. Distantly, they could see a vague wooden erection, from which came the hammering.

"It looks like a scaffold," said Gale.

They descended to street level, and their captors halted them again. A fresh burst of noise was coming from farther up the street, where lights bobbed and people sang in fluting voices. The four Lemnosians exchanged remarks with one another, and pointed. It was a procession consisting mostly of children, headed by a boy with a bandage on his knee and a plaster on his head : he led by the hand the nervously grinning crewman Bingley. Adults ran down the walks from the caves, and soon the procession had stopped and was surrounded by assorted Lemnosians, who listened and hooted, apparently with amusement. Bingley was hidden from view for the moment.

Anderson jeered, "Local boy saves alien and makes good : make um all earth men good fella."

"If it's really as corny and simple as that," said Gale, "what the hell are they laughing at?"

With their captors they went into the crowd : Bingley stood grinning as his young friend told the crowd his story, and the onlookers guffawed. Then the little man saw his two bosses, and greeted them with unabashed cheer.

"I caught the kid eventually, and he made out that he wanted me to come here. Thought we might get a line on the inhabitants you know. I told you I was entertaining—"

"Here," said Anderson, "just what is this kid doing?"

In the weird light, surrounded by bobbing faces, the boy was going through juggling motions, pointing at Bingley, laughing and gesticulating.

"He's telling them about me cheering him up : look at his actions. Here kid, hey !"

And on an alien planet with an alien audience, Bingley produced three rubber balls and a penknife and started to juggle. The crowd roared.

"Listen though," said Gale, "those aren't cheers. They sound more like jeers to me."

"You wouldn't expect them to sound exactly like Earthmen," Anderson reminded him.

Bingley had added a pen and a pencil to the articles : to the other two it seemed quite good, but the Lemnosians found it funny.

" I don't get it," muttered Gale.

The answer came a moment later. They boy Bingley had rescued, who had disappeared for a minute, now returned with some children of his own age. They carried balls, club-shaped bits of wood and other less easily recognisable things. They stood solemnly in the centre of the crowd, and then, at a signal, they began to juggle. First slowly, with four articles apiece, then faster, with five, six, seven, eight and even nine each, until the human eye could not follow the whirling objects. The Earthmen gaped as the virtuoso kids turned somersaults, leaped in and took each others pieces, all at the most furious pace. Other kids came from the crowd and took their turn, while the elders clapped and shouted and found time to point derisive fingers at Gale and Anderson. Bingley was near them.

" It's beyond me gents : how on Earth—"

" Eureka !" yelled Anderson. " I see it. You *have* found a point of contact with these people. We think that this is very skilful, but to them it's just a child's game, and you're just a clumsy mutt ! "

Bingley scratched his head as Gale added eagerly, " They were afraid of us before, but now they've found that there's something they can do better than we can, and they feel superior about it. Hear 'em laugh ? Fear and laughter can't go together: carry on Bingley ! "

Bingley carried on and the Lemnosians laughed till they cried. When Gale and Anderson suddenly found themselves free, they dived for stones, clawed pencils and knives from their pockets, and set out to make themselves as bigger juggling fools as possible. It was a good beginning.

John Kippax

There will always be stories dealing with aliens arriving upon Earth, but the more we think about Brian Aldiss's latest below the cleverer we think it has been contrived. For a very simple reason—but to give the secret away in the caption would entirely spoil the pleasure of finding it out for yourself.

OH, ISHRAEL !

By Brian W. Aldiss

The buttercup in David Dale's buttonhole was beginning to wilt. He half-smiled down at it because it seemed the one connection between him and the Berkshire village he had left early that morning. Nothing else David could see, either here in the hospital waiting room or outside the window, had as much colour as the buttercup.

The waiting room was all greens and greys, relieved only by chromium. Outside, there were only greys and blacks, as evening yawned down on acres of shunting yard. Quiet. Quiet for parsecs around, that treacherous quiet when nothing stirs but the anxiety deep in your bowels.

Parsecs. Galactic. Hyper-space. Interpenetrators.

Those were the sort of words that worried David now, churning through and through his brain. Nearing fifty, he had known the words for years ; they were just words, without any attachments to experience, dictionary words. Only in this year, 1957, had they come to unsettle his whole life.

A silent, quick footstep passed the door. David was at once on his feet, the sick feeling rising with him. What conclusion had they come to about Ishrail? Was he born on Earth or not? Or (it was really all the same question) had he been proved sane or insane?

For a minute David stood trembling, then sat down again, wearily. He resumed his indifferent scrutiny of the marshalling yards; this kind of sight was unfamiliar to him, living as he did in the country. Generally, it would have bored him; now, it did possess a faint tinkle of interest, for he saw it through Ishrail's eyes. And that changed the pattern entirely.

The uncountable miles of track belonged to a primitive transport system on a remote globe. All round the tiny globe stretched—not sky, as David had once thought—but the great, complicated highway called space. Not a simple nothingness: rather, Ishrail explained, an unfathomable interplay of forces, fields and planes. Ishrail had laughed to hear that earth-word, space; he had called it not space but a maze of stresses. But of course Ishrail might well be crazy. Certainly nobody in Berkshire had ever talked as he did.

And through the maze of stress-fields, Ishrail had said, rode the Interpenetrators. David thought of them as space ships, but Ishrail called them Interpenetrators. They apparently were not made of metal at all, but of globular force shields, which fed on the stress-fields and changed as they changed; so the people of the galaxy rode in safety between the civilized planets.

And the planets warred on one another. But the war was not as David understood the term. It was as stylised as chess, as formal as a handshake, as chivalrous as an ambulance, as unrelenting as a guillotine. Its objectives were more nebulous and vast than materialist earthmen could visualise. Or so said Ishrail, but of course Ishrail might be mad.

Even if he was, that did not affect David's loving admiration of him.

"Don't let them find him insane! Don't let them find him insane!" David said, in an agony of repetition, speaking to the grey walls.

And yet . . . if you proved Ishrail to be sane . . . you had to believe his mad version of reality.

After all his hours of waiting, David was unprepared when the door opened. He was standing with his fists clenched to his chest, and dropped them in confusion as the white-haired

man came in. This was Dr. John Hansford, the psychiatrist who had interviewed David when he brought Ishrail in. He was tall, thin and brisk, and remarkably ugly, although age had now taken the sting out of his features, leaving them little more than notably rugged.

David went straight over to him.

"Ishrail?" he asked.

Under that tense, eager stare, Hansford flinched.

"We aren't actually certain yet," he said, in his formal way. "Some of the factors involved invite very cautious evaluation indeed . . ."

"It's a month since I brought Ishrail here!" David said. "I brought him for his own sake, but he can't like it here, being under constant observation and everything. Surely in that time—"

"A quick decision would only be a foolish one," Hansford said. "Ishrail is quite happy here; and you may rest assured he is not being treated like an ordinary mental patient."

"You've told me that before!" There were angry tears in David's eyes. He had the sensation that the whole organisation of the hospital was rearing up against him. "In the short time since I found him, I've grown to love Ishrail. Surely even you people here can feel his goodness of character."

"His character is not in question. We are examining his mind," Hansford replied. "Excuse me if I sit down; it has been a trying day."

He sat down on a hard chair and allowed his shoulders to sag slightly. David, old enough to understand the weariness that might lie behind that innocent-looking gesture, felt his wrath deflected. Distrusting psychiatrists enough to wonder if the incident might not be a covert attempt to win sympathy, he still kept hardness in his tone as he said, "All the same, Dr. Hansford, you must have felt his gentle nature. Give me a personal opinion, for heaven's sake; I'm a stock-breeder, not a lawyer. Ishrail's saner than you or I, isn't he?"

"No," Hansford said slowly. "If you want a personal opinion, you protégé is sinking rapidly into schizophrenic trauma. Paranoia is also present. He is, in popular usage, a hopeless case."

Colour drained from under David's tan. He fumbled wordlessly for words among the green and grey slices of whirling room.

"Let me see Ishrail!" he finally gasped.

"That will not be possible, Mr. Dale, I regret to say. The medical council have agreed that the patient will be happier in isolation."

"But I must see him," David said. He could not believe what Hansford was saying; for an insane moment he thought the man must be talking about someone other than Ishrail. "I've got to see him—I'm his friend. You can't keep him here!"

Hansford stood up. His face, like David's, was pale. He said nothing, merely waiting for David to finish. That was more ominous than words.

"Look here," David said, unable to resist argument, although knowing already at the back of his mind that it was probably useless. "This tale Ishrail has told us about the great civilization of the galaxy—the stress-fields of space—the interpenetrators—all the details of life on other planets—strange animals, and flowers—you can't believe he made it all up in his head?"

"Mr. Dale," Hansford said in a brittle voice, "kindly credit us with knowing our business here. The patient has a fertile imagination; it has finally collapsed under too much reading—omnivorous reading, I may add, which has encompassed both learned works and fourpenny trash."

"But his story of this galactic war—" David protested.

"Tell me," Hansford said with dangerous calm. "Do *you* believe a galactic war is now raging, Mr. Dale?"

Pause. The engine yards were floating away on a tide of darkness, in which isolated lights strove to act as buoys. The sky was one big cloud, cozy over London. Supposing I do believe, David thought; how can I prove I'm sane, any more than Ishrail? How can I prove to myself I'm sane? Two months ago, I would have laughed at this galactic stunt. It's just that the way Ishrail told it, it had the ring of truth. And yet—it is all a bit far-fetched. But that's *why* I believe it: it's too tall not to be true. Believe? So I do believe, hey? But I'm not sure. If I were *really* sure, they'd lock me up too. Oh, Ishrail . . . No, better play safe. Before the cock crows twice . . .

"Uh . . . Oh, I don't know what to believe . . ." he faltered miserably, ashamed of remaining uncommitted. The yellow buttercup mocked his downcast eyes.

"I actually came to tell you that the medical council is still in session," Hansford said, his voice a shade warmer than urbane. "Sir Reginald Tate-Pound, our director, is there, if you would care to have a word with him."

" I suppose I'd better."

Stop shaking, you old fool, David told himself. But he could not stop. Directly he had denied Ishrail, he knew he believed in him, and in all he stood for. He knew further that nobody else believed. So it was up to him, David Dale, whether Ishrail was released from what might be a life's confinement—and whether man believed Woomera and White Sands to be a way to sterile planets or bright, friendly worlds. All he had to do was to convince a board of experts, who had apparently already made up their minds on the subject, that they were wrong. That was all : but it would not be easy.

" Can I see Ishrail first ? " he asked.

" You force me to answer that question as I answered it before—with a negative," Hansford replied. " Now if you'll come with me . . . "

They walked down the corridor to a lift, went up only one floor to a more grandly appointed part of the building, and so into an oak-panelled board room. Thick curtains had been drawn here, a fire burned brightly, and over the mantelpiece hung an original Stubbs, an anatomical drawing of a tiger.

A long table stood in the middle of the room, armchairs ranged its walls, but the four men present stood and aired themselves by the fire. As the round of introductions disclosed, Sir Reginald Tate-Pound was a small, stocky man with a bald head, his manner reserved, his voice dry.

He shook hands perfunctorily with David, crossing to the table to get a spring folder of notes.

" This is a very interesting case for us, Mr. Dale," he remarked.

" It's more than a case to me, sir," David said.

" Er—yes. Of course. Be warned, though, against letting it become an obsession."

" It's not becoming an obsession," David said. " I take Ishrail's part, sir, because there is nobody else to take it. The whole thing seemed pretty simple once, but since he's been up here in your hands it seems to have got more and more complicated."

He was aware as he spoke of sounding less courteous than he had intended. Unfortunately, he was confused. The board room confused him, the rather restrained members of the council confused him. Although in his own sphere, dairy farming and stock-breeding, David was well-known and respected here he felt out of his depth, too conscious of seeming the simple

countryman among the experts. A horrible feeling seized him that he was about to make an ass of himself, and from then on it never left him ; it got between him and his reason, forcing him into saying always the wrong thing.

" I mean—this business is just a question of common sense," he added, making things worse instead of better.

Sir Reginald looked up quickly at him.

" There are problems, unfortunately," he said, " where common sense is too blunt a tool to work with, Mr. Dale, and Ishrail's problem is one such. Indeed, we have achieved results only by trying several oblique approaches, as you shall hear."

" I was just offering my opinion," David said. He intended it to sound penitent, humble even, but it sounded defiant.

" Quite so," Sir Reginald said quietly, inspecting his fingers as if reading dialogue on their tips. " But you must realise that phoning us every night for the last fortnight has been of very little assistance to us. We were giving the problem all our attention as it was."

He shook his head and smiled. They had had a long, trying meeting—and now this ; but he did attempt to give David a chance. David, however, caught the note of reproach in the director's voice and flushed heavily, feeling like a small boy brought before his headmaster.

" How should I know what you were doing ? " he muttered.

A gleam of irritation showed in Sir Reginald's eye and disappeared. Hansford, knowing his superior, feared for the worst : the director was not a forgiving man once he conceived a dislike for someone. From then on, David was at a disadvantage ; instead of becoming a discussion, their meeting became a muted clash of personalities, its outcome already predictable. Sensing something of this, he tried to wrench the conversation back into a safer channel.

" I believe Ishrail to be sane !" David exclaimed. He could see immediately that his bluntness made them more withdrawn. For them, he was now the stupid layman, unable to evaluate evidence.

" I am just going to run through a few notes for your benefit," Sir Reginald said, rustling the papers. " They will explain our findings on the—er, patient and, I sincerely hope, clear your mind of any anxieties or uncertainties you may have."

" Tell him about the specialists, Reggie," Hansford said in an aside.

"Yes, yes," Sir Reginald said. "These notes are extracts from specialists all over the country who have examined—er, Ishrail, as he calls himself, during the course of the last month. Sit down, Mr. Dale, sit down."

David hesitated, then sat. The three members of the council who had not spoken seemed to take this as a cue to disappear. They nodded to Sir Reginald and Hansford and sailed out like three dancers in a dull ballet.

"Now," Sir Reginald said. He put on a pair of horn-rimmed spectacles. "First let's get our facts straight. Ishrail was discovered sheltering in a barn on the evening of February 27th last by George Russell, a labourer on Major Sturgeon's farm. He was naked and dazed. Russell wrapped sacks round him and took him to his home. In the morning, Ishrail was better, although his memory seemed clouded. He spoke English perfectly—an important point, Mr. Dale, which alone throws grave doubt on his, hm, galactic origins."

"But he explained—" David began.

"Oh yes, he *explained* everything, Mr. Dale. To continue the summary. Ishrail stayed at Russell's house till the next morning, the first of March, when Russell took him to Major Sturgeon. Major Sturgeon kept him for three days, in which time he got you and MacDingle, the local G.P., to question him. The police were also brought in to try and trace Ishrail's previous whereabouts, but so far nothing has come to light."

"A point for Ishrail."

"A small point for Ishrail," Sir Reginald conceded. "And that's about it ; you alone seem to have placed much credence in the man's tale, and knowing of my friend Hansford here through mutual acquaintances you decided to bring Ishrail up to us. A wise step, if I may be permitted to say so."

"I did it for Ishrail's sake," David said. "He was deeply disturbed to find that nobody believed him. I could see he would soon begin to question his own sanity ; he had just gone through a period of great strain. I wanted you to prove to him he was sane. You would have been powerful allies for him !"

With a little dry crumb of sound, Sir Reginald cleared his throat, continuing his account as if he had not heard David.

"For the past thirty-two days," he said, "Ishrail has been thoroughly examined from every viewpoint. The first thing was naturally a physiological check. It revealed nothing at all abnormal in the patient's make-up. No bones out of place, not a

spare ounce of cartilage, no extra lungs, not even—" he allowed himself a modicum of amusement—"a concealed tentacle. In every respect, Ishrail is a physically normal man, born here on Earth, destined to die on Earth. I think we might have indeed expected some trifling irregularity if he had been, as he claims to be, a hm, specimen of galactic life."

"Why?" David asked hotly. "Can't evolution run the same course on two planets?"

"He has a point there, sir, you know," Hansford murmured.

"A point we did not overlook," Sir Reginald agreed. "Which brings me to the next step in our investigation. We were, you see, impressed enough with the lack of logical flaws in Ishrail's arguments to take a good deal of trouble. I personally rang up the Astronomer Royal and asked him about life on other planets."

He paused impressively. David just waited.

"The Astronomer Royal," Sir Reginald said, "told me that the possibility of life on other worlds—apart perhaps from a few lowly fungi on Mars—is entirely unproven. Furthermore, he cautioned me that direct evidence of the existence of planetary systems other than our own is not yet forthcoming. And he finished by assuring me that space travel is utter bilge."

David could restrain himself no longer. He jumped up.

"You call that taking trouble?" he exclaimed. "Heavens above, who am I to argue with the Astronomer Royal, but what's he know about it? He's no expert on space travel!"

"Agreed," said Sir Reginald, making his voice a few degrees cooler. "There are no experts on space travel. Space travel is a—a chimera, a modern chimera, like the Middle Ages' idea of witchcraft. Won't you sit down again, Mr. Dale?"

Sitting was the last thing David felt like doing. He tried to appeal silently for help to Hansford, but the latter was gazing into the fire. With a bad grace, David plonked himself down onto the chair.

"Go on," he said testily.

"With your permission," Sir Reginald said. "We now came to Ishrail with the next tests. I refer to the psychological ones; and that is a field in which, you must take my word, there are experts. We—if I may say so without transgressing the bounds of modesty—we are the experts."

"For our consideration, we had this unlikely document, the statement of Ishrail, elicited from him in numerous interviews. In brief, it related the facts of Ishrail's life, how he grew up, became what we would call an admiral in the interpenetrator

fleets (to use his own extraordinary phrase), was defeated in some sort of battle and landed on Earth stark naked and without a penny to bless himself with.

"I'm not going to waste your time, Mr. Dale, or my own, in embarking on a detailed description of that fantastic farago of autobiography. Transcribed from tape and divided into subjects, it fills five fat volumes ; you will see we have been thorough. There are, however, one or two cardinal points on which our diagnosis of Ishrail rests, and these I will bring to your attention. You may find their perfervid inventiveness more attractive than I do."

"Just a minute," David said. "You're telling me this, and I can see from every word you say your mind's tighter shut than an oyster. Was it like that before Ishrail came to you ? Because if so the poor devil didn't stand a candle's chance in hell !"

"I say, steady, Dale !" Hansford protested. "That sort of stuff will get you nowhere. Try and—"

"We're getting nowhere as it is," David snapped. "I'm a countryman and I like plain speaking."

"Hansford," Sir Reginald said, removing his spectacles and turning wearily to his colleague, "I suspect I may be unable to talk plainly enough for our country friend. Perhaps you will take over the explanation of what was, after all, your, hm, pigeon."

"Certainly," Hansford said. "Perhaps you'd like me to get us drinks first, Reggie ?"

"Capital idea," the director said. "I believe they are concealed in that surely rather ornate cupboard over there."

As Hansford crossed the room, Sir Reginald said to David more humanly, "You know, Dale, we believe ourselves to be in effect doing you a favour in explaining all this to you. You are not in any way related to Ishrail ; we merely were somewhat touched at your loyalty to a very unfortunate case."

"I'll endeavour to feel obliged to you when I've heard the rest of what you have to say," David said grimly.

Whisky was handed round, and cigarettes. Hansford sat down by the fire, putting his thin hands out to the flames.

"You'll probably know," he began quietly, "that however elaborate and circumstantial the imaginings of a neurotic person are, they reveal certain basic emotions like fear, love, lust for power. Looking beyond the symbols that a disordered mind uses to camouflage these emotions from itself, we can generally see the emotive impulses quite clearly. In this respect, Ishrail

differs not at all from any case we have ever handled, except that his imaginings reach the peak of inventiveness.

"Note several points. This impressive civilization to which Ishrail claims to belong spreads across ten thousand planets and five times as many light years—or it may be fifteen thousand planets and ten times as many light years: Ishrail doesn't remember."

"Would you remember?" David asked. "Tell me how many towns there are on earth!"

"That is not the point I'm making," Hansford said. "I'm trying to show you how Ishrail strove to build up a pattern of complexity in his make-believe world. The war that was being waged was also amazingly complicated, like enlarged 3-D chess with obscure motivations and strict rules of chivalry. Ishrail seeks refuge behind this confusion, endeavouring to lose himself."

"But a galactic civilization would be complicated!" David wailed. "Why can't you just take it that he's telling the truth? He's got no motive for lying."

"His motive is the usual one in such cases," Hansford said. "That is, as complete an escape from reality as possible. And he cannot be telling the truth because what he says is too fantastic for a sane man to believe; and also you will notice that he has cleverly picked on a story which does not involve him in the awkward necessity of producing a shred of tangible proof!"

David sunk his head into his hands.

"You go round in circles," he said. "He told you why he arrived naked without any possessions."

"That's what I'm complaining about," Hansford said. "Ishrail can explain everything! The interpenetrators that brought him here came silently and left silently, and were invisible. We've not got a thing: no sight of ships, no tell-tale marks in a field, no scraps of cloth of an alien weave, no rings made of strange alloys, not even an Aldebaran corn plaster on his foot. Nothing. Not a shred of external evidence anywhere."

"And if you had anything, you'd explain it away," David said.

"We'll continue with the next point," Hansford said, raising an aggrieved eyebrow at Sir Reginald, who nodded sympathetically. "Notice that Ishrail joined the interpenetration fleets and worked his way up to Admiral."

"Well?"

"Megalomania—and we shall find it recurs over and over again. Here it masquerades under the flaring suns of an admiral's

insignia. Yes, he even drew the insignia for us. He couldn't be a squaddie, could he, or a stoker, or whatever they have ? He had to be an *admiral*, an admiral in a mighty space fleet. Most people stick to Napoleon."

David was silent, avoiding the challenge in the other's voice. He felt his assurance fading and longed to speak to Ishrail again, feel re-invigorated by that unquenchable nature. If these devils would only see it, a man like Ishrail could be nothing less than admiral.

"The next point," Hansford continued, "is even more damning. You will remember that Ishrail was captured during this extraordinary war by the enemy. They vanquished him. And did Ishrail happen to tell you what the name of the race was which vanquished him ? It was Ishrail ! Ishrail was conquered by Ishrail !"

"What of it ?" David asked stupidly.

This was too much for Sir Reginald. He leant forward, glass in hand, his jaws almost snapping.

"What of it, you dare ask ?" he said. "If you are attempting to insult us with stupidity we may as well consider this meeting closed. Ishrail is suffering—to couch the matter in terms you might comprehend—from split personality. He is himself ; he is also his own worst enemy. Ishrail against Ishrail—a man divided against himself. It's obvious even to a layman."

"Not at all," David said, trying to check his anger.

"Well it confounded well should be !"

"Not at all !" David bellowed. "Good God we fought the Germans in the last war—did we lock up everyone in this country called German in the nearest loony bin ? It's just a coincidence."

There was an icy silence.

"I believe," Sir Reginald said, "that that disgusting term you employed for mental institutions has ceased to be polite usage even in the music hall."

"You must not dismiss everything as coincidence, Mr. Dale," Hansford said hurriedly, waving his hands as if to hush Sir Reginald. "You must try to regard this from the viewpoint of psycho-therapy. We do not believe in coincidence. Let me proceed to the next and last point, on which the crux of the matter may be said to rest.

"The etiquette of this incredible galactic squabble, Ishrail claims, renders a captured admiral or similar large fry liable to

exile for life. As we might expect in this case, the exiling itself is a complicated business, a mixture of leniency and harshness. The exile concerned—by which we mean Ishrail—has his name struck off the rolls of civilization and is left on a planet absolutely bare-handed and bare-backed. Before he is landed, he is taught by hypnotic means to be fluent in the language of the planet or country to which he is banished. Which neatly absolves Ishrail from the difficulty of having to pretend to speak a strange tongue."

"You make him sound such a liar!" David said bitterly.

"No," Hansford contradicted. "We are convinced he genuinely believes all he says. But remember—and this is another let out for him—he cannot speak the galactic tongue, because that was erased when they forced English down his throat.

"Damning though that is, it is the lesser half of the exile edict. It was stipulated, according to Ishrail, that exiles should only be landed on planets outside the galactic union, planets too primitive to have developed even what he calls 'mechanical' space travel; there they have to survive among hostile natives as best they can. In other words, England is Ishrail's galactic idea of hell."

"Just why do you find that so damning?" David asked.

"Why? Because it is all too plainly the fabrication of a guilty mind trying to punish itself by inflicting eternal suffering on itself."

Before David could recover himself sufficiently to answer that, Sir Reginald got to his feet, smoothed an imaginary hair over his bald head and spoke.

"So there you have the Ishrail case, Dale," he said. "He is a wretched creature, haunted by the spectre of persecution. I trust you appreciate, though I fear you don't, the great pains we have been to in this matter, and the neat way in which we have tied up all the loose ends."

"Plausible though Ishrail is," Hansford said, also standing to conclude the meeting, "he is clearly revealed as hopelessly, even dangerously, unbalanced. Quite honestly, there's hardly a disorder in the book that isn't present in greater or lesser degree. And we've not unravelled them all yet."

"Give the police a little longer to trace him," Sir Reginald said with relish, "and we shall probably find he's a common murderer with amnesia actuated by guilt."

Oh, Ishrail! You a common murderer! The hostile natives have indeed got you in their beastly, filthy nets! You should

have come a million years ago—the Neanderthals would have shown more understanding, more mercy !

David screwed his eyes up and raised his fists slowly before his face. Blood swam and roared in his veins like a waterfall. For a moment, he thought of throwing himself at Sir Reginald. Then hopelessness dropped neatly over him. He lowered his hands.

"I must see Ishrail," he said dully.

"That will not be possible," Sir Reginald said. "We have had to remove him to a quieter place ; he threatened to get violent."

"Do you wonder ?" David said.

Sir Reginald and Hansford stood side by side by the fire, waiting politely for him to leave. David stood defeated before them, the only man to believe in Ishrail, rocking unintelligently from one foot to another, his jaw slack. At last he sighed, turning without a word of thanks to leave. He caught sight of the tired buttercup in his lapel ; how it must have amused Sir Reginald ! Yet David felt obscurely that it was his slender link with sanity and the galaxy.

Suddenly he saw the planned cruelty of Ishrail's exile, the bitterness of being among a people without understanding.

"I'm going to phone the papers to see if they will help me !" he said resolutely.

"You'd probably get a warmer welcome if you tried the science fiction magazines," Sir Reginald sneered, but David had gone.

He found his way blindly down into the street. A cold wind met him, and he recalled that he had left an overcoat somewhere in the hospital block. Now it was too late to return for it. Overhead, through thinning cloud, galactic stars shone with terrible urgency.

Brian W. Aldiss



This month our article is not concerned with the problems of space travel or the birth of solar systems or even of-stars, but with the vastly more complex formation and origin of the galaxies themselves. Here indeed Man's enquiring mind is slowly filling in some of the complex problems presented by the limitless Cosmos.

GALAXIES GALORE

By Kenneth Johns

Not all the myriad lights in the sky are single stars. Many are multi-million stellar clusters making up island universes ; the galaxies.

A sub-unit in the Universe, each galaxy may contain as many as the 100,000 million stars of our own Galaxy, a few of which we see at night as the broad Milky Way arching across the heavens.

Separated by awe-inspiring distances measured in tens of millions of light years, the galaxies are amongst the most fruitful of today's foci of research. It is upon galactic studies that so much of our understanding of the Universe is built ; thus the

study of the history and structure of galaxies, both observational and theoretical, makes up the majority of present day astronomy.

Everywhere in space we look—along, above, below the galactic plane—there are the fuzzy nebulae of galaxies shining to challenge man's imagination. Separated from us by time as well as space, sometimes their light is 'fossilised' by travelling for an aeon half as old as the Earth.

Much of man's knowledge of his own Galaxy comes not from direct observation of its detailed structure—astronomers are in the position of the man who cannot see the distant parts of the wood because of the trees—but from analysis of the nearer galaxies above and below the galactic plane where there is little obscuration by dust. Often we are able to view these galaxies face on, so their marvellously detailed and intricate network of arms can be seen in all its splendour. These distant galaxies can be seen in such detail that modern cameras and telescopes distinguish individual stars in both nuclei and arms.

It was in this way that the two great types of stellar population, types I and II, were identified with colours and orbits of two intermeshing populations of stars within the Great Nebula in Andromeda. The spiral arms could be resolved into single fast-burning Population I stars by the 100 inch Mount Wilson telescope ; but it was not until red-sensitive plates were developed that the fainter Population II stars were picked out as individuals. The red Population II stars are old ; probably 5,000 million years has passed since their formation, compared with the 50 to 100 million years total lifetime of the blazing blue Population I stars.

Galaxies vary only 200 fold in their total brightness, far less than the million-fold variation in the brightness of stars, although the average galaxy is about one hundredth as bright as ours. The size of galaxies varies by the very small factor of twenty.

Yet, quite apart from brilliance, not all galaxies are similar in shape and structure to our own.

Firstly, there are the irregular galaxies, amounting to only 2 - 3% of the total number. They are raggedly beautiful in their unformed complexity of stars, gas and dust, sprawling across space. Slightly flattened, they are generally smaller than the large galaxies, but they are the galaxies richest in gas and dust and the hot, blue Population I stars typical of fertile star fields. The Magellanic clouds are examples of this type, filled with the flare of spendthrift stars blazing with pure energy, and apparently containing no old, redder stars of Population II type.

Many astronomers believe that these are the youngest galaxies and will, in time, evolve into the other types. In the Magellanic Clouds there is the hint of the formation of arms, as if the system is an embryonic form before attaining adulthood.

Secondly, at the farther end of the scale, are the elliptical galaxies, often approaching close to spheres. They appear to have no internal structure, being monotonous in their symmetry—as if any irregularity has been washed out and obliterated in the long passage of time. Their close-packed stars near the nucleus gradually thin out towards the rim until they merge imperceptibly with intergalactic space. These elliptical galaxies are mature ; more—they are dying. No new stars are being born in their finely spun framework. They contain only the red Population II stars, each one losing its hoarded nuclear energy dispersed as heat, and guttering its way towards extinction. The stars are dying because there is no dust and gas in their interstellar space to feed the dying fires, to create the brilliance of new stars and to give them the semblance of youth. As the cold seeps in, the frigidity of space is their unalterable end.

Most elliptical galaxies are small and faint ; but a very few are as bright as the most brilliant of the spiral galaxies of space.

Between these two extremes is a third type, a whole range of spiral galaxies, the most beautiful of all the stellar collections. All are large and brilliant, flaming with the energy of both Population I and II stars. The spiral type of galaxy is exemplified by our own ; but the known thousands of others vary widely in size and definition of the arms and nuclei. Over 80% of all the brighter galaxies are spiral and a third of the spiral galaxies are barred having a central bar connecting opposite arms across the nucleus.

They are best thought of as being composed of a thin disc rapidly rotating around a central, spherical nucleus. The gas and dust is concentrated in the arms, where are found the young Population I stars.

A spiral galaxy is really made up from two superimposed galaxies, almost as if an irregular galaxy had been swirled by rotation and spun round an old elliptical galaxy. Only one in a hundred stars in our Galaxy is of the young Population I type and all of these are concentrated in the spiral arms and are moving with the same speed and direction as the vast clouds of gas of the arms.

Conversely, the older red stars of the nucleus move in all directions and follow random orbits to make up a thick, structureless system extending well above the thin plane of the arms.

Yet the spiral arms, in spite of being extremely abundant among the galaxies, must be evanescent, being continuously dissipated and reformed. They are only temporary features—if they were permanently attached to the central system they would in a very short time be wound up like a clock spring and form a featureless blob at the centre of the galaxy.

Our Sun and attendant planets sedately circle the Galaxy at 137 miles per second every 230 million years, whilst stars halfway between us and the Galactic hub complete the revolution in only 120 million years. But we know that the Galaxy has existed for much longer than that, long enough for a 'winding up' process to have taken effect. The only reasonable suggestions so far advanced are tentative ones: that the arms are built up on the far side as they evaporate on the inner, or that there is an outward thrust from the magnetic field of the galaxy.

That giant magnetic fields may be generated in intergalactic space is shown by the fact that the magnetic field of one galaxy may interact with that of another and so affect both their shapes. In some cases a spiral arm bridges the space between two galaxies. Some barred galaxies have a nucleus which contains an inner set of spiral arms.

Only when all the gas and dust in the arms is used up in forming stars will the arms finally disappear and the elliptical part of the galaxy be left to senescence and oblivion.

Why, when all galaxies had most probably similar origins, are there these three different forms? Is there evolution from one state to another, or does the form followed depend on circumstance at each separate galactic birth?

Differing answers are still given by astronomers to these questions; only further observations and calculations will finally solve the problems. The general picture of the evolution of galaxies is one of contraction and condensation.

A galaxy begins as a tenuous cloud of gas alone in space. Composed of separate smaller clouds, it has no real boundaries, but in the course of time its own gravitational field causes it to contract. Each small cloud has random movement when compared with its neighbours; but all feel the same common attraction and gradually, over millions of years, begin to accelerate inwards. As they contract they occupy less space and collide

and so part of their kinetic energy is converted into heat as molecule hits molecule. But the heat is not retained, it is radiated out into space over the aeons, just as any hot body leaks heat to a cooler or less radiating space. As the galactic cloud shrinks so the magnetic lines of force tend to become concentrated.

As each molecule loses some of its kinetic energy so the inexorable pull of gravity has more effect, accelerating inwards. The greater the mass of the original conglomeration, the slower the rate of contraction ; thus massive galaxies age more slowly and, having more material to form stars, have a far longer life expectancy.

But there are other forces counteracting the effects of gravity. Even whilst the clouds are contracting, local concentrations of gas become dense enough to contract and condense under *their* gravitational fields—to coalesce into the first stars.

Then radiation from the, at first red-hot and then quickly white-hot, stars raises the temperature of the surrounding gas clouds. They regain their lost kinetic energy and fight the chains of gravity.

Once a star is formed it cannot lose its kinetic energy, the sum total of that of the gas from which it was formed. Gas molecules may collide ; but stars are too far apart for the possibility of collisions to materially affect a galaxy. These first stars are believed by some astronomers to be the red giants making up much of Population II and each has the random movement of the cloud from which it condensed.

The overall effect is the production of a sphere, an enormous globular cluster of stars.

The remaining gas clouds contract further and begin to rotate—the drifting clouds of primeval gas still have much random movement which make it improbable that they should balance in diametrically opposite directions. With rotation comes centrifugal force to challenge and balance gravity—but only in one plane. Above and below the plane of rotation, gravity still pulls the gas inwards, flattening it into a disc-shaped system cutting through the central sphere of stars to create a spiral galaxy. Once formed it becomes stable.

The first stars to condense out of the primordial sphere of gas are globular clusters and RR Lyrae variable stars ; later, when the system has flattened, long period variable stars are formed. Only when the thickness of the disc is about a twentieth of the diameter of the spherical centre do the newer Population I

stars appear. Population II stars, between a third and one and a half times the mass of the Sun, are formed during the initial condensation of the gas cloud.

This is an explanation of the origin of spiral galaxies and it can be extended to cover elliptical galaxies merely by postulating that the original gas clouds gave the system a very much reduced spin. Thus a stable disc could not be formed, the centrifugal force being small, and all the gas was drawn into the central nucleus where it built up more old Population II stars. Hoyle suggests that the very large galaxies, such as ours and the galaxy in Andromeda, are formed by the compacting together of two or three hundred small galaxies which originally condensed as 30,000 units from a giant gas cloud.

The theory does not explain the origin of irregular galaxies nor the strange phenomenon of the differing speeds of rotation across the plane of the spiral galaxy. Some astronomers prefer to believe that all galaxies follow one evolutionary path, first condensing as an irregular galaxy then developing spin to create the disc of a spiral galaxy and, finally, losing its disc through gradual condensation into stars, eventually to reach the quiescent state of an elliptical galaxy.

Small spiral galaxies are unknown ; one reason for this may be that they age very quickly and soon become elliptical.

Of the 1,000 million galaxies visible to the 200-inch telescope, only a couple of thousand are close enough for their structural details to be seen. Of these, only 17 are within one million light years—we are part of this small cluster of galaxies.

The tendency for galaxies to group together in clusters has been recognised for some years and the systems they form are known as supergalaxies. Sometimes these contain more than a thousand individual galaxies.

When the galaxies in such a supergalaxy are clustered close together, as in the Coma cluster, there is a good chance of their colliding. Only one galaxy in every 200 million is, on the average, undergoing collision. In the Coma cluster, for example, 500 galaxies are packed into a relatively small space and they have each had 5 to 30 collisions during the last 5,000 million years—an average of about 20 collisions per galaxy. The collisions have swept the gas and dust out of the spiral arms, leaving only the bare, scraped skeleton of the stars. Thus they have the characteristic flattened disc shape of spirals without the

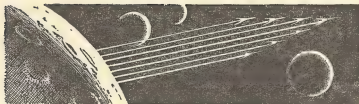
young hot stars and spiral arms typical of spirals—they are suffering from arrested development.

Many galactic problems remain unsolved. It is still impossible to decide absolutely on the true picture of the evolution of galaxies. Compared to the vastness of space even the enormous volumes of the galaxies are infinitesimally minute. If all the material in the galaxies were spread evenly throughout the Universe, it would amount to only 10^{-30} grams in every cubic centimetre. And modern cosmologists championing the steady-state theory of the continuous creation of matter, state that there should be ten times this amount, the so-far undetected mass being tenuous hydrogen gas spread throughout the vast reaches of intergalactic space.

This problem is on the fringe of the advancing frontiers of science and the conflicting theories will only be reconciled or proven invalid when the giant radio telescopes now under construction come into use.

Science's picture of the Universe is marred by many white areas. The picture is still being changed, blank areas are being filled in, corrections made to the sketch of the drama of worlds without end ; there is a constant striving towards comprehension of the complexities overlying the basic laws which govern the Cosmos. To perceive and understand the hidden mysteries in the profound depths of the Universe Man will need to use the imaginative powers of his brain to the uttermost limits.

Kenneth Johns



Trapped beneath one of Earth's oceans by a unit of the Bishop Wilkins' harvesting Corporations, Commander Jeremy Dodge of the Space Force discovers that his only chance of seeing fresh air and sunshine again is to become a first-class 'manfish' and earn promotion. Meanwhile, in the depths, strange events are taking place.

GREEN DESTINY

By Kenneth Bulmer

Illustrated by LEWIS

Part Two of Three Parts

PROLOGUE

A difficult financial decision faces the United Nations—to push ahead with the development of interplanetary travel within the Solar System or grant immediate aid to the Under Ocean Patrol, a sub-mariner force essential for policing the underwater farmlands of the continental shelves. Most of Earth's produce now comes from beneath the seas and vast combines have sprung up to exploit these natural resources. A bitter rivalry has developed between many of the companies, culminating in a form of gang-warfare with sudden raids of destruction and the all-important purpose of capturing under-water workers.

Hopelessly outmanoeuvred by the raiders owing to insufficient man-power and funds, U.O.P. chief Simon Hardy demands of his superior, Secretary Henderson, still greater financial aid from the



U.N. Henderson states that the reverses U.O.P. have suffered are swinging opinion into backing the conquest of space, especially as four submarines have now been lost in mysterious circumstances in the Juliana Trench, a 25,000 feet deep gash laying across the southern trade routes.

Commander Jeremy Dodge of the Space Force has been summoned to meet a Mr. Grosvenor, executor of his Uncle Arthur's will, and is met by Elise Tarrant, Grosvenor's secretary, who takes him to the Blue Deep Hotel where Grosvenor is expected. The hotel is actually under the ocean and they reach it by taking a dirigible from the shore and landing on the roof, which is above water.

Dodge is completely mystified by the peculiar circumstances of the arrangements and although greatly attracted by Elise Tarrant feels that there is something deadly behind the assignment. Despite this, he agrees to accompany Elise in skin-diving equipment to an underwater chalet where Grosvenor has gone on a hunting expedition. Leaving the hotel airlock they ride by underwater aquaplane to the chalet but as they reach their destination Dodge is attacked by three men and drugged by hyperdermic injection.

When he recovers he finds that he now belongs to one of the under-water slave gangs who eke out an existence farming and riding herd on the fish life. There is no escape from his watery prison—the workers are confined to air-bubble globes when off-duty and jealousy guarded by trained sharks while farming the deeps. Of Elise Tarrant there is no sign and he realizes that he has been deliberately pressganged into a life fraught with danger.

Making friends with another diver named Harp the two, after much planning, manage to cut their way through the wire nets used to herd fish, but are not free for long before they are captured by a rival Company and imprisoned in a sub-tow balloon to avoid discovery by a prowling Under Ocean Patrol submarine. Dodge discovers that Elise Tarrant and a young Siamese girl are also captives and the three, together with Harp, fight their way out of the sub-tow balloon back into the deeps—only to be intercepted by another prowling submarine and netted.

Separated from the girls and Harp, Dodge is imprisoned in a tiny cell aboard the sub and drugged by an infiltrated gas. When he recovers consciousness he discovers that the cell is completely filled with water—and that he does not have any breathing apparatus! A surgical operation has been performed upon him turning him into a man-fish!

VII

Ocean Secretary Henderson and Minister of Aquiculture Werner were in the midst of a deeply distressing conference when the deepsea call came in from Admiral Simon Hardy of the Under Ocean Patrol. The screen lit up, showing at once the grim-faced, teak-jawed admiral, the stump of his left arm jerking irritably at his side. Seeing was good, the ultra-sonics carrying both vision and sound clearly from the depths of the sea, 600 feet down.

"I've just received your call, Henderson. Had an Urgent in from a patrol."

"Hullo, Simon," Henderson said, hoping that the atmosphere would be allowed to settle before he had to say what he had to say. Simon Hardy was a crusty old shell-back at the best of times. "Hear that you lost another sub in the Juliana Trench."

"Don't worry, Henderson. I didn't disobey orders. The sub was on patrol and this happened before the recall went out." Hardy was obviously suffering under a load of repressed emotion that was threatening to blow his skull apart.

"I didn't think you had, Simon. After Sub Nine was dragged down, I don't think even an old fire-eater like you would send another one into that area without some very deep thinking."

It was a sore subject with both men; the Minister of Aquiculture shifted uneasily and then a short-lived smile of relief flitted over his face as they decided to drop that conversation and switch the subject to less explosive channels.

"I've been thinking I ought to drop out and visit you at Trident, Simon," Henderson said.

"Surely. Surely." Hardy betrayed nothing, yet there was warmth in his tone. These men had been the pioneers of aquiculture, forcing through their programmes of undersea farming and production, pitch-forking new ideas into the maelstrom of discontent and hunger engulfing the Earth, until at last something had given way. That something had been hide-bound authority. Now the continental plains ringing the sea-coasts were aswarm with the Bishop Wilkins Corporations. More food was grown under the sea than above it. Processed fish and fish-products were on every table—and few housewives could be certain that what they were cooking had once had the unmistakable tang of fish. It had been a Piscean revolution.

Hardy's blunt-fingered hands caressed his chin, then dropped to the stump of his left arm. He gripped the piece of elbow

that was left. There was a faraway look in his eyes. Henderson, watching, knew what Hardy was thinking.

"Was it all worth it, Simon?" he asked softly.

Hardy opened his eyes to stare straight from the screen at the Ocean Secretary. "Worth it! Every damned minute of it—including this!" And he brandished the stump. "I'm not a dry-neck, never could be, now." He puffed out his lips. "How do you stand it there, Henderson, stranded on dry land at U.N. Headquarters? Don't you ever get sick for the sea again?"

"I'm coming to visit you, Simon," Henderson reminded.

"Sure." Hardy nodded his head to the Minister of Aquiculture. "Bring George, too. Both of you could stand getting real wet all over."

Werner and Henderson smiled, a little shamefacedly, a little placatingly. Old Hardy was more than a fanatic on deep-sea life—they almost believed that if there were no Admiral Simon Hardy, there would be no under-sea life.

Werner said: "I'd like that, Simon."

Beyond the open window—which did nothing for the labouring air-conditioning plant—the parks and lawns and shade trees stretched away towards the city outline, stabbing the horizon like a jagged paling fence. The afternoon air was filled with the muted hum of millions of people, all busy, all preoccupied with life and its problems, all enjoying to the full the benefits culled by science from the waters of the oceans of the world. Thinking that, all three men—Henderson and Werner in their U.N. skyscraper, Hardy in his submarine rockwalled fortress—could at least grasp at the illusion that they had done something worthwhile with their lives. At the very least, they had staved off the starvation that lowered over the world before the seas had been opened up.

The harsh jangle of his intercom broke into that quiet, meditative pause, and Henderson sighed and opened the key.

"Captain Pinhorn, Space Force, to see you, sir."

"Send him in."

Henderson, flipping off the intercom, said over his shoulder so that Hardy could hear: "We were talking about this Captain Pinhorn when you called, Simon." The atmosphere of tension was back.

"Anything to do with me?"

"Unfortunately, yes. He's come down from the Moon on the trail of a Space Force Officer who has disappeared." Henderson's thin face showed resigned disapproval. "Claims he was kidnapped underwater."

"I don't think any Bishop Wilkins Corporation would be crazy enough to pressgang a serving Space Force Officer. What are the details?"

In the brief moment before the door opened and the announcement of Captain Pinhorn, Henderson had time to say: "Fellow went to the Blue Deep Hotel—you remember it, Simon—with a girl working for his uncle's manager. Uncle just died or something. All we know for sure is that both of them disappeared there, they didn't come back. Checked in at the Blue Deep, went for a hunt—and vanished." Henderson painted a genial smile across his nervous features. "Ah, Captain Pinhorn come in! Sit down. Cigarette?"

"How-de-do, sir. No thanks, don't smoke."

"Good. Under Ocean and Space have that in common, anyway, Captain."

Pinhorn sat down, flicking his Space Force blacks into their leading-edge crease in the gesture that every Space Force Officer must have had ingrained into him at academy. His body was small and compact, his head set well back on his neck so that he had always the impression of arrogantly challenging all the world. His thin black moustache and dark skin followed that pattern of aggressiveness. His soft speech was the outer mark of an iron self-restraint that existed only because its owner was firmly convinced that he was not just as good as the next man; but a good few parsecs better.

Pinhorn, without preamble, said: "Thank you for seeing me so quickly, sir. I'd like to get on this thing right away. I'm not allowed to tell you the full details, but Commander Dodge is required urgently for special work."

Henderson decided to show his teeth, too.

"Saturn?"

Pinhorn did not betray by a single muscle that he was either dismayed, displeased or bored. He was a singularly self-contained man, withdrawn from the world in which lay his work—the world lying below the normal paths of men's minds and actions.

"Commander Dodge went to this hotel with a Miss Tarrant; that I found out from the hotel in town he'd left as his leave address. He had mentioned to friends that his uncle had died

and that he was needed on Earth to clear matters up. When the nature of those matters came to my attention, I immediately contacted you as the Head of Underwater."

Down in his fortress under the sea, Hardy was wondering just why Henderson had personally bothered with all this. Henderson's normal method would be to initial an aide's report.

Then Pinhorn said: "Commander Dodge's uncle is—or was—Arthur Dodge, who you may know—"

Simon Hardy burst out, startling the others: "The Artful Dodger! So he's dead, is he? I hadn't heard."

Captain Pinhorn swivelled to stare at the screen. His eyes and eyebrows asked questions. Henderson, looking on, felt a wry amusement. Certainly old Simon Hardy looked like nothing on Earth with his naked torso, bulging eyes from the contact lenses, hair waving about when he moved and settling into that familiar white helmet when he was still, and irritably jerking a stump of arm that seldom ever was still—and that was true, anyway. Hardy wasn't on the Earth, he was under the sea. Henderson said: "Captain Pinhorn, Space Force: Admiral Hardy, U.O.P."

And luxuriated in his satisfaction as Pinhorn took it.

The spaceman's recovery was good. He went on evenly talking. "I cannot contact the manager, a Mr. Grosvenor, and the affairs of the Arthur Dodge—Bishop Wilkins Corporation are in an uproar. So I came to the top." He paused, and then said: "Tell me, sir. Why are all the undersea farm companies called Bishop Wilkins Corporations?"

"I thought everyone knew that. When Admiral Hardy, the Minister of Aquiculture, and myself began the work which was to lead up to the undersea situation we have today, we decided, to avoid complications, that it would be fair to dub our brain-children with the name of the man who had first conceived the idea. The first man we knew of was Bishop Wilkins." He turned his head. "How does it go, Simon?"

Simon Hardy smiled, as though thinking back on days that had been very good.

"Bishop Wilkins lived back about the seventeenth century and was enthusiastic about diving and submarines and the new underwater toys that the Renaissance had thrown up again after fifteen hundred years' desuetude. They had some weird equipment in those days! Anyway, as far as we can tell, Wilkins was the first man actually to commit to print ideas for a real undersea

colony, with air chambers and corridors, and divers living and working down there. He saw a real and vivid picture, did that ancient visionary."

Pinhorn said as levelly as he could : " Did he also foresee the possibility that the owners of the undersea colonies would press-gang people to work ? That they'd use methods abhorrent even to his days ? " He put one fist on top of the other and pressed hard. " A commander of the Space Force has been kidnapped to work undersea—a victim of outdated and barbarous methods of labour recruitment. I know my superiors don't like the idea at all, I don't—and I feel confident that whilst this practise continues you gentlemen cannot feel that all is well with Under Ocean."

" All right, gentlemen," Henderson said. " We deplore the disappearance of Commander Dodge, Captain. I must say personally, that as you appear to have knowledge of the press-gang systems used by some Corporations, I can only suggest that no Wilkins Corporation is going to be fool enough to kidnap a Space Force Officer." He held up a hand as Pinhorn tried to interrupt. " However, as you seem convinced that your man has been kidnapped, I put it to you that you won't see him again."

It was blunt, brutal—but it was the only way.

" As you know, sir," Pinhorn said, " I am an Intelligence Officer of the Space Force. My duty is to find Commander Dodge. I intend to do that—with or without your help."

Henderson raised his shoulders. " Very well. Then the best thing you can do is to come out with us to Trident, that's Admiral Hardy's base. You might find something there to make you change your mind."

" I doubt it, sir. But I'll be in the sea. And that's where I have to be if I'm to find Jerry Dodge."

VIII

You're walking quietly along the street one day and you fall down an open manhole. That's bad. You're out of luck that day, all right. You look around, more annoyed at being such an idiot than frightened, or hurt.

And then you find out you've dropped into Dante's Inferno. And the realisation sinks in—and sinks in—and you'll never get out, never, never, never . . .

You'll breathe water the rest of your life.

You're a manfish—you'll never breathe air again.

Under the sea, for ever . . .

Commander Jeremy Dodge, Space Force, remained insane for a period of time that for ever afterward was a blank ; a nightmare-peopled hiatus in his life. His last conscious mental picture was of a fish, idly swimming through the bars of his cell. His next impression that was not distorted by the madness rotting in his brain, was of the same fish, or a relation, idly swimming back through the cell grating.

He lay, eyes open, for a long while, staring at nothing. This was his moment of truth—this was where he came face to face with the complete knowledge of himself. Whether he could square up to what his life was to be, accept it, not merely rationalise it out—that way had caused too many psychotics before now—but come to terms with it, see it for merely another facet of what he had to do, what he was born to do and be. Complete acceptance of life under the sea as a part of his destiny was the only course that could bring him anything apart from pain and madness and death.

And—he didn't want to die.

He sat up on the bunk, spread his fingers and passed his hand before his eyes. He could feel the resistance of the water. But there was nothing to see that he would not have seen had he performed that action in air. He put his hand to his face. No face-mask. Yet he was convinced that he could see as perfectly as he could in air ; and Harp had said the refractive index of water made human eyes useless. His fumbling fingers found the answer. Contact lenses. Immersed always in salt water they could stay in permanently, without the burning irritation that came in time when worn in air.

How he relished that phrase : ' in air ! '

He was breathing in long natural rhythms that seemed perfectly ordinary and there was a relaxed feeling of goodness in his throat. Salt water was the cradle of all life. A man's lungs could be adapted, he supposed, or maybe they'd been cut clean out and gill cavities substituted ; but then, his chest wouldn't rise and fall, would it ? He shook his head. Acceptance, once it was accepted, brought other problems.

A curious, droning, rising and falling noise attracted his attention and he cocked an ear. It took him a few moments to sort out what he was hearing, and then the truth hit him in the face, and sent him back on the bunk, fighting the last residue of hysteria.

Somewhere, a brass band was playing the Prelude to Act Three of *Lohengrin*.

He listened to the strains, sorting them out, realising that the water played its own tricks on acoustics. Sound travels four times as fast in water as it does in air, but some of the high notes were awfully shaky. The rum-te-tum-tum of the big brass instruments seemed to seep into his nerves.

Then the door opened.

He was back to reality at once. Back to himself. Back to the reason why he was here in the first place.

"All right, pal, come on out."

Obediently, he stood up. The foreman who hung in the doorway, watching him alertly, looked like any other undersea foreman that Dodge had had dealings with. The only difference was that he, too, breathed water. The seven-shot harpoon gun was trained casually towards Dodge, and the man's flippers quivered faintly under the readiness-state of his nerves and muscles. He wouldn't be easily jumped.

"Come on, come on!" The gun jerked impatiently.

"I'm coming," Dodge said—or tried to. He mouthed the words, moving his tongue and lips; but nothing sounded from his mouth. He tried again, a sudden panic flooding him that he was dumb. He could feel the water moving in his mouth, not unpleasantly, but not a noise could he make.

The overseer gave a grunt of disgust. "You can't talk, slavey. Pressure's too great—have to fly up nearer the surface for that. And that's just what you ain't going to do."

Dodge saw the man's microphone and amplifier then, and understood. Resignedly, he stood up and began to walk towards the door. It was tough going.

"Fly, slavey, fly. I ain't got all day."

Dodge thrust downward with his leg muscles, and shot towards the doorway. The foreman beat once with his flippers and shot backwards, reversed with masterly skill and hung, all quivering, the harpoon stabbing at Dodge's navel.

"That wasn't clever. Not clever at all. Just move around cautious, like. See?"

Dodge nodded his head. Beyond the foreman he could see other shapes in the rock-hewn passageway. Men, like himself breathing water, being roughly herded into line with quick blows of streamlined billies. So it was the same old story all over again. Without flippers it was harder to fly; but he made it and fell in with other slaves.

There was no sign of Harp. In these strange and perilous surroundings, Dodge missed his companion's quick readiness and matter-of-fact knowledge of undersea life. But—would Harp know anything about the menfish? Perhaps he hadn't been operated on? Flying laboriously up the corridor and emerging into a sketchily illuminated area where mudfalls sluiced down from sheer rock walls rising in a half circle above, he began to remember other things and people from the life now for ever closed on him.

Elise.

The ache of not seeing space again, of being barred from taking his ship up on the clean fire of atomic jets to the remote chips of light in the sky, all that had become numbed, as though it were a part of his childhood. But Elise . . . Finding her, and then losing her, twice over, was a treacherous trick of fate, or at least a monument to his own stupidity. He shuffled into line with the other slaves, feet stirring the sandy bottom, and peered around for signs of his friends. He recognised no-one.

He began to feel cold. The coldness spread from his chest, spreading out like the flow of glaciers to every part of his body. Around him the other slaves were glancing uneasily about, moving their arms and legs uncertainly, held by the fear—so quickly ingrained—of the foremen and their weapons. No-one of them would be likely to make a break; it was getting uncomfortably cold. Dodge tried to tell himself that these underwater bosses wouldn't carry out expensive operations on men and then allow them to die of cold as soon as they were roused; but if he didn't warm up soon, with water drawing off his body heat at its rapid rate, then he and the others would be seriously injured, if they didn't die.

Perched on an outcrop of rock, a man dressed in a foam rubber suit stood lazily on his fins and watched them. There was something at once menacing and hateful about his easy arrogance as he stood there, smiling down on them. At last the tension snapped. A few ranks away from Dodge a huge red-haired man suddenly leaped up into the water, his broad face ugly, his knobbly fists clenched. His mouth opened and closed and Dodge guessed he was shouting violently. Then, as though realising the ineffectiveness of that, the big man wrapped his arms around himself and shook. As an imitation of a cold man it was first class.

At once there was response. Four guards streaked towards the protesting slave, hustled him away. The others were rapidly

shepherded back into the rocky hole. As soon as they were inside, Dodge began to feel warmer.

The water in the maze of passages in the rock was artificially heated, then. Worth remembering.

Passing the grumbling thunder of turbines circulating the heated water, they were brought out into a globe-shaped cavern, and the foam suited man flew negligently, to stand on a small dais at one end. He began to speak. At first Dodge paid little heed to what he was saying, wrapped in his own thoughts ; but the substance of the lecture quickly drew his attention.

"An interesting experiment. It should convince all of you that any attempt at escape is fruitless. The temperature of the outside water is low, about eighteen degrees Centigrade, and you are all breathing that water, it is inside you, and if you try to escape you will stiffen into frozen corpses so fast that we shan't even bother to hunt after you."

In his present miserable frame of mind, that, Dodge was prepared to believe. The warmly clad man went on :

"You still have a slight positive buoyancy, because your lungs do not entirely fill with water, if they did you'd sink, having no buoyancy chamber ; the system adopted by our surgeons is the best available. You should feel honoured." He was really enjoying this, Dodge noticed sourly. "You have observed the gill slits under your arms—"

Dodge nearly cricked his neck twisting and turning, as did most of those around him. He couldn't see round far enough. Then he saw the man in front. There were a number of slits under the arms, running between his ribs, and as Dodge watched, horrified, they opened lazily, and then, just as lazily, closed. He felt round with a trembling finger, and his hand recoiled as it encountered the slits in his own body.

"You take in water through your nose and mouth, and your glottal stop is, by this time, reacting automatically. The human organism reacts wonderfully well ; the epiglottis is no exception, and learns to distinguish between sea water for the lungs and gill slits, and fresh for the stomach. So far, you have not been fed—which made the cold-water experiment you have just been through all the more effective."

Dodge had the insane desire to shout at the man, to hurl invective, to leap up there and tear him off his perch, to rend all the arrogant contempt of him. Then he remembered the red-haired man. He had been allowed to make his protest, and had then been hauled off as a potential trouble-maker. A neat, if nasty, technique.

"Fish are equipped with what is known as a 'red body.' This extracts oxygen from the blood stream and passes it into the bladder, thus enabling the fish to rise. The 'oval' removes the oxygen, and the fish sinks. Those organs of your body have been restored to you. Grafting is a fine art." The fellow was actually drooling over it all, over the macabre things that had been done to these men's bodies. Dodge felt the dull rage of anger burn through him.

"Your lungs are filled with oxygen when you wish to rise—and the normal oxygen-poisoning that takes place when oxygen is under nine atmospheres pressure does not affect you as those lung sections are not then being used for breathing purposes. I assure you, you will all feel perfectly at home undersea, and will work well. Any attempt at revolt will be met with instant suppression."

Dodge wondered vaguely whether he'd say that if you tried to escape you'd be shot, and if you tried again they'd flog you to death, and any subsequent attempts would meet an even worse fate. He couldn't even raise a smile.

The man lording it over them from his dais was wearing a full breathing set coupled in with his foam rubber suit. So *he* was all right. He wasn't condemned to breathe water for the rest of his natural life. Dodge's slow burning anger branded his mind, the injustice of it all ousted for a mad moment the phlegmatic acceptance he had schooled into himself during those bad hours in the cell. The slave-driver was speaking again, his amplified voice loud in the rocky chamber. A small piece of coral fell from the roof and drifted idly down. Automatically, men moved out of the way. It might have been fire coral. And with the normal death cycle of coral when the sun's light is dimmed in the depths being severely interfered with by men's artificial lighting—well, no-one was taking chances.

"There is much work for you here. At first you will be employed in sheltered waters on the edge of the scarp. Later, you will go farther afield." A mocking note edged the condescending voice. "One other thing, before you go about your work. We have your welfare at heart. Good workers will be rewarded. Trouble-makers will be punished. Always remember, whenever you are mad enough to dream of revolt or flight, that both are impossible. Never forget that if you work well, you may be given the chance of further surgery which will let you breathe

air. That should be your goal, towards which you strive." He held up a hand, beckoned.

Guards poured in, shepherded the slaves out and into a long mess hall with tables arranged neatly. No-one needed to be told to eat. The food was vitamin rich, fatty, lots of sugar, all of it in forms which could be chewed without loss in the salty water. Developing the trick of swallowing without getting a stomachful of salt water took time and patience; at the end of the repast everyone was eating as fast as they could. They knew that food represented life.

Flippers were issued and as he adjusted his, Dodge realised with a shock that penetrated his sombre, hating mood, that with the flippers on his feet he felt at home, as though some part of him had been made up—as though he had been missing a vital organ. He crushed the stupid desire to look at his hands in case his fingers were growing webbed.

He decided irritably that if anyone started quoting poetry about sea changes he'd invite them to change places. Although—anyone he was likely to meet would be in the same position as himself. He kicked off and flew moodily across to the assembly point. Someone's flipper caught him a blow on the arm and he turned, snarling—a facial grimace that, underwater, with the weak vocal chords of a human being, meant nothing. The culprit backed off, shook his hands together in apology, and darted off. Dodge flew on.

At the next issuing point each man had a bell fixed around his neck. The thing tinkled inanely away under his chin. But it wasn't in the least funny—sound would betray underwater far more than on the stillest night above ground.

Guards and overseers bullied the men about, pushing them into lines, sorting them into teams. Dodge was thrust roughly into a group of ten others, then peremptorily ordered through into an upward sloping tunnel. Lights at intervals threw mercury gleams through the clear water. He flew upwards, the infernal bell a mocking tintinabulation reminding him of captivity.

IX

Like the opening of that manhole seen from the sewer, a round opening grew in size above him, first a farthing, then a shilling and finally a half-crown. The overseer halted the party and reached out for a telephone set in a coral niche. Small fishes darted away in all directions. Two little fellows no more than half an inch long flew cheekily out of the mouthpiece.

It wasn't any telephone that could operate in air, Dodge saw. Really, it was a speaking tube, filled with water and with a diaphragm at each end. Sound vibrations travelled along the tube at nearly three thousand miles an hour, concentrated, perfectly private and inaudible to any listener whose ear was not clamped to the diaphragm. After a few moments conversation, the guard replaced the phone and the party resumed its upward climb.

A magnificent emerald green light filled the whole world when Dodge poked his head through the hole and wriggled out to stand on firm-packed sand. Before him stretched a fairyland of wonder, an enchanted garden, an underwater Eden on which the gates had been slammed long ago, leaving the serpent and its brood in undisputed possession. Here the bottom was level, extending to the lip of the continental shelf and the great deeps beyond, and the entire area visible presented at once a scene of grandeur and impressive achievement, and a brooding sense of impending catastrophe that nothing short of fresh air and sunshine could dispel.

Gigantic madreporic formations rose like a parody of a sunken city, crenelated towers, battlements, pylons and arches sprawling in confusion, creating a labyrinth of life. Tiny coral fish, iridescent, flashed everywhere like jewels. Floating serenely in scarcely appreciable currents, tufts and blossoms of *Alcyonaria* like candy-floss moved like clouds. Above, the surface was quite out of sight, the blueness of the water seeming to extend to infinity. At the edge of vision vague shapes hovered. Directly above Dodge's head a blaze of yellow illumination came from a lamp suspended on tripod legs and at regular intervals other lamps shed light onto the underwater world; the light, seen from a distance of over thirty feet, assuming that deeply gorgeous emerald green so characteristic of under ocean. And over everything was draped the blue filter of the water, softening outlines, filling crevices with mysterious shadows, robbing everything not directly illuminated of its colour and texture.

Men's limbs took on a ghostly sheen, as though rubbed in grease-paint. Faces and bodies glowed a pale greenish-blue, colours greyed and standardised in an aquamarine of pristine purity—and the brilliant strokes of hard primary colour that showed on man-made objects and on coral and fish whenever they moved into range of the lights, forced a glaring contrast almost indecent in its ripping away of the blue veil of mystery cloaking the watery continent.

A bed of human brains, of monstrous size, leered in intricate convulsions under his feet.

Shakily, Dodge forced his overstrained nerves to relax. Those animal growths so like outsize human brains were merely brain corals ; but the first onslaught had given him a jolt.

Seaweeds of brilliant colour vying with the hues of their coral hosts trailed away in riotous profusion. They swayed with a rhythmic abandon, lazily, in time with unfelt currents. The whole effect was of watching a garden in a cinematograph machine that had been slowed down to quarter speed. It was eerie, compelling, utterly foreign and yet intensely familiar : Dodge recognised with a deep sense of humility that the sea and its marvels meant something to him now—with all the pain and misery and humiliation that that knowledge had brought—that he could never have believed when he'd stepped from the spaceship on Earth.

The overseer waved an arm and the little party moved off. Everywhere in this undersea kingdom men flew, gliding down from upper working parties, toiling round a coral formation, filing down into one of the many openings honey-combing the bottom. Some sandy patches, clear of marine growths, contained wire-mesh pens in which strange fish swam round and round, tirelessly, hungrily, restlessly.

Dodge knew that the seas had been through the upheaval of man's rearrangements : fish of types never before seen in familiar seas had been brought in and bred into huge, food-potent schools. Distribution of fish now was a headache to any orderly minded ichthyologist. Food fish, in particular, what the slaves called sardines, had been forced to live in conditions unfamiliar to them, and with the ready promptness of all living things had quickly adapted over the generations. Perhaps the most outstanding change in fishy life had been the emphasis on depth. Now, coralled in their mile-wide pens, fish lived at depths in which, before the hand of man had been felt beneath the waves, they would have rebelled, retreated at once to their more familiar sunny waters of the surface. But all this aquiculture, this intensifying of nature's gifts along channels best suited to man, took place only above the continental plateaux. Out in the great waters the immense shoals of fish still enjoyed their age-old freedom of the seas.

Dodge, in his group of slaves, flew on over the undulating bottom, gliding into a brilliantly lighted area, sweeping on into

the blue-shadowed land between lamps and then veering to climb a coral wall and dive down to resume their onward progress. A water-breathing man flew past slowly, his white smock emblazoned with a large cross, which, as he passed an illuminated area, Dodge saw was red in colour. The doctor was being towed by a large black-fin shark, and the shark looked extraordinarily sorry for itself. The black-fins are not dangerous, and it looked as though this specimen had run head-on into something that was.

The doctor and his charge veered slightly to allow a sword-fish to pass them. The sword-fish had an ultrasonic set attached to its back, just behind the head, and a set of harness attached to its body. Two men with harpoons flattened themselves in the harness against the sword-fish's side, and their steed bore them onwards with powerful surges of its tail. As they vanished into the blue veil another team similarly equipped followed them.

Then came six tiger sharks, each a good twenty feet long, their tiger stripes showing up clearly as they swam through illuminated water. There were steel muzzles around their mouths, their wicked yellow eyes gleamed with a phosphorescent fire, chilling, and the man holding their six leads had a slender stick with which to prod them along.

Dodge began to think that something was up.

A voice bellowed through the water.

"You there! Where do you think you're going?"

The overseer hauled up, his hand upflung to arrest the progress of his group. Dodge hung, motionless. Down towards them flew a burly, black-haired man wearing an armoured vest of dural scales. He held a compressed-gas repeater harpoon as though he knew what it had been designed to do.

"Reporting to Herring Pen Sixteen," the foreman said. He was puzzled.

"Haven't you heard, then?" The armoured man sounded exasperated. "The way they run things down there it's no wonder killers go off on the rampage."

"Rogues?" The foreman looked uncertainly at his group. His hands gripped his harpoon nervously.

"Rogues, killers, we don't know yet what it is. Cut up a shark recce group, lost a couple of men, too." He motioned with the harpoon. "You'd better go back and report to your boss. Sixteen is too near the trouble area to have slaveys flying about in the way."

Shadows flitted across them and Dodge quite clearly heard the thump of propellers. A small two-man sub leaving a twisting tube of disturbed water behind it sped past ; men and fish clung to it at every vantage point, cadging a free ride. Six large fish that he didn't recognise swam purposefully, in rhythm together, towing a piece of underwater ordnance that looked like a giant hypodermic syringe equipped with balancing fins and rudder. Armoured men streamlined themselves along the limber and the gun. Outriders, mounted on swordfishes, flanked the battery. All in all, Dodge realised with rising excitement, this was a full-scale operation. Horse, foot and guns were going in.

The weirdness of it all, the bizarre conception of men riding fish, using killer sharks as hunting dogs, harnessing fish to haul cannon, all the bewildering possibilities open to underwater man was lost on Dodge. He had a vague feeling that what was going on around him was unusual ; but the human mind sets its own limitations on the amount of fresh experience a man can take. And after he'd awakened to find himself breathing water, the circuits were full ; no other panic messages could get through, nor would they for some time to come.

The foreman turned his ten men around and they all flew back to the same tunnel from which they had emerged. Dodge felt quite normal. There was no strain in flying underwater in his present condition. He felt that the business about the cold, on the little amphitheatre on the side of the continental plateau below, had a phoney ring. That fellow, with his foam-rubber suit, had gone to a lot of trouble to sell the idea that the water was so cold it would invariably kill the slaves. Hell—he was flying in the same water now, wasn't he ? Admittedly, it was a lot shallower here ; he was not over the profound depths of the ocean bottom proper. But, still— He wished fervently that Harp was around to discuss things. They'd resolve the communication problem, all right. Just a bit of time and experimenting.

He had the time. The days that followed, artificially divided by sleeping and waking and punctuated by eating, formed a pattern based on that first day. Wake up. Eat. Fly out to work, tending the fish, looking after algae beds and cutting seaweeds, a hundred and one jobs formed the daily drudgery. Then back to the rocky cavern with its ricketty bunks and their mattresses that felt as though filled with coral.

He wondered why his skin didn't go white and slough off, and discovered that their diet encouraged an oil skim over their own skin through the sweat pores. Those calmly methodical devil-doctors who had done this to him thought of everything. He was growing tougher and stronger than he had ever been in his life, certainly more robust than when he'd floated around in spaceships in free fall.

Some slaves had secreted slates, with chalky writing implements that allowed them to luxuriate in the splendours of communication. Just to receive the impression of another person's mind, new thoughts, outside interests, was a precious experience, an asset to be hoarded and prized and defended against the raids of the guards. News circulated. Dodge soon became *au fait* with what went on in this Bishop Wilkins Corporation ; but one significant fact did not escape his observation. No-one knew the name of the company. Reason for that, he tried to hammer out in his own mind, must be because there was a chance that the slaves could escape. The bosses did not want escaped slaves knowing who had taken them. So there was a chance to get away ! If only Harp were here . . .

Information about the Rogue that had caused his group to return on the first day was scanty. Whispers—in the form of hastily scribbled phrases—seeped round that a huge killer shark, all of forty-five feet long, was prowling the outer nets and corals. Other rumours said that a cachalot whale had gone mad and was tearing through the pens and plankton factories leaving destruction in his wake.

The rumour, small yet persistent, in which Dodge was most interested, wishing to believe it, said that the trouble was the work of escaped prisoners living in a sunken wreck. Discounting all the romantic rubbish about sunken wrecks, the idea that someone—if only men like himself who could breathe water—were consciously seeking to communicate with the slaves, possibly to help them to escape, filled him with an indescribable glee. His hatred for the men who had done this unspeakable thing to him was so deep, so much a part of him, that he was no longer conscious of it. It manifested itself in his psychology, in the way he thought, in his glee that someone was out to damage the farms owned by the bosses. He rubbed his fins in anticipation.

He was put one day with a smaller party than usual, just the overseer and two other men who were unknown to Dodge. Their job was to clean out a large tank that had at some time in

the past fallen or been tipped over and was now a living mass of marine growth. The task would not be pleasant, and the menfish had been issued with metal-reinforced rubber gloves and short handled rakes. Dodge knew all about sea urchins, fire coral, and *pteoris volitans* the fire-fish which looke like waving branches of coral until the rows of stingers go into action. Their poison causes such intense pain, Dodge had been warned at lectures, that a man could swim through boiling water without having his attention distracted.

All that merely pointed up what he had felt to be true as soon as he began to find his fins in this watery graveyard. Now that he was a manfish, sharing in the comings and goings of others like himself, his masters were taking greater care of him than ever they had done when he was merely slave labour equipped with an aqualung. He represented invested capital to them now. The operation must be of titanic complexity and skill, capable of being performed only by a master of surgery equipped with the latest techniques.

Flying with sure practised strokes of his flippers, his hands relaxed at his sides, Dodge considered the slave-state mentality and took comfort from the eventual downfall of every slave-based empire of the past. These past days he had been aware within himself of a growing acceptance of his future. He would not always be a slave. Certainly, he could never become a foreman, a lackey of the dryneck bosses. But there must be some niche he could fill—perhaps the Space Force could find employment for him on Venus—the delightful calculations of designing a spaceship to be filled with water at pressure flowed through his mind. He became absorbed. He was finding something of his old self, the spaceman who had roared out to Jupiter and ventured onto the sunside of Mercury. Commander Jeremy Dodge, Space Force, no longer existed, only Jerry Dodge, manfish, trying to work out some rational pattern for a future life of some use to himself and to humanity.

The encrusted tank loomed up out of the blue veil. Dodge did not know at what depth beneath the surface he and his mates were working ; but sunlight reached the bottom here, filtered of all yellows and reds and violets. Just the all-pervading blue-green that cut down vision on days of good seeing to sixty or seventy feet and on bad days, when the plankton stream had been diverted, for instance, to zero. He knew little enough about the technicalities of under ocean ; but he felt convinced that the shelf where they worked must rise from the main continental

plateau by a considerable distance. Maybe he was labouring in a favourable spot. Maybe he was lucky. He banged the rake on the tank meditatively. It rang like some drowned tocsin of the deep.

Wedges of fish criss-crossed, fleeing in all directions, their fins blurs of speed. These brilliant, picturesque, inedible fish still flourished, undomesticated by man.

The overseer motioned with his harpoon, and the three slaves began slowly to chip away at the encrustations. A single little fish, about six inches long, floated out of the top of the rectangular tank, turning its body slowly from side to side. The foreman's lamp threw a yellow globe of light, the beam of which was invisible leaving only the rays' impact to show where it was directed. In that light the little fish gleamed like a priceless jewel.

Dodge stopped chipping to stare. The fish's bright blue body was banded by golden stripes, and its fins were a glittering, glorious gold. Dodge was spell bound. The fish showed no fear of him. It stood in the water, looking almost gravely at him. Dodge flicked his flippers and rose, glided towards the little fish. Momentarily, it stood its ground ; then it backed off and Dodge was looking down into the tank.

He couldn't shout. He waved his arms, beckoning, and the others flew up to join him at once. In the tank lay a large shark.

Even as the menfish above looked down, the shark's widely grinning mouth opened. Critically, Dodge thought that the movement lacked the precise snap he had expected. Then he saw with shock the bunch of small fish clustered around the shark swim deliberately into the gaping mouth. He felt bewilderment at this mass voluntary suicide. The fishes disappeared, the wide cruel mouth closed. And then Dodge realised that the little blue and gold fish had gone in with the others. His bewilderment increased.

The overseer said : " Mother shark. Those are her nippers. Real mother love, these sharks have. Never believe, you wouldn't until you see it happen." He shifted position and dropped lower, harpoon at the ready. " Thought so. She's a goner. We'd better get those sharklets out and take 'em back to the nursery where they can be looked after."

The job was pathetically easy. The mother shark's strength had all gone, torn away by the hunger gnawing continually at all sharks, spurred by their huge, oversized liver. Carrion eaters and scavengers of the seas. Dodge had always had a revulsion



towards them ; now he felt sympathy for their sad ever-hungry fate as the young sharks were taken out and the dead mother left to moulder in the tank, her flesh and bones eaten away by the parasites of the seas.

The four menfish flew back, herding the sharks, lines quickly lashed round their tails. Dodge became aware of a dark shadow flicking about just above his area of vision. He lifted his head. Riding his pressure wave was the blue and gold fish.

"Oh, no !" Dodge said to himself. "I'm caught ! I've inherited a pilot fish !

It wasn't a remora, a sucker fish, so there was no chance that it would stick itself to him and refuse to let go until its head came off. He tried to shoo it away ; but the little devil stuck to him persistently, riding around him, bobbing along on his pressure wave, sliding down between his legs and coming up, as

checkily as you like, on the other side. Eventually, Dodge gave up and philosophically paddled back.

Anyway, he was far too immersed in thought about the main item he had seen in the tank. That dying mother shark, pathetic, sad, had given him food for thought. He had seen studding the flat head a pattern of tiny upright sticks. What they were he did not know. Touching them had told him they were metal, metal needles. The shark's head was a mass of such needles. Lying on the floor of the tank had been a plastic, streamlined cover, and Dodge would bet everything he hoped for that that plastic cover had fallen off the bed of needles—it might even have caused the shark's death. He shook his head. There was something here that must have a direct bearing on the control of fish. He had an idea what that system was, now, and he schemed how he could turn the information to his own benefit.

All the way back the brilliant little pilot fish frisked around him.

X

The water was growing imperceptibly darker. Far above them the sun's rays were slanting ever more steeply on the face of the deep ; soon the sun would sink beneath the horizon and utter darkness would enfold the depths. By that time every manfish who was not on outside duty would be shut up in their rocky cells, eating their ample meal and making wearily for their beds. Dodge went through the whole procedure mechanically, and his little pilot fish went as faithfully through the same procedure. Dodge tossed it a morsel of food, and the little beggar snapped it up and grinned for more.

That settled the issue. He had acquired a pilot fish for life. It was his own personal satellite. He decided to call it Sally.

Dodge and Sally flew off to his cell, angling down through the water-filled tube beneath the ground. A file of menfish was ascending and the slaves pressed to one side to allow the armoured and armed menfish to brush roughly past them. The night patrol, equipped with heated suits and lamps and asdic, these men carried out a prowling guard of the rim all through the hours of night. Dodge was paying them little attention, automatically keeping his legs clear of the too-freely brandished harpoons.

With a sense of shock as deep as any he had experienced since his awakening as a manfish, he saw Harp in the midst of the patrol.

He moved forward involuntarily, his face lighting up. Harp was clad in a scaled, heated suit, with the twin headlamps on his forehead giving him a gargoyle look of power. He had a seven-shot compressed-gas harpoon, and the way he handled it told Dodge that Harp had found some surcease from agony.

The frustration of dumbness maddened Dodge. He grimaced. He grinned. He waved his arms.

Harp looked at him. Harp said: "Out of the way, slavey. Or I'll tickle you with this spear." He thrust the harpoon forward. Blankly, Dodge fell to one side.

He flapped his arms frantically, opening his mouth, forming words. This couldn't be!

Harp frowned. "Get out of the way, slavey!"

Dodge felt the prick of the harpoon. He pressed against the rock wall, watching Harp fly on, the muscles rippling across his thighs, his gill slits opening and closing like narrow mouths across his back and under his arms. Even in that moment of utter horror the fleeting thought of the master surgery needed to bypass the interlacing intercostal muscles tantalised Dodge with his own helplessness.

Dodge floated there a long while, looking blindly down the tunnel after Harp. And when he turned to fly back to his bunk his face was as hard as the rock about him.

Pulling off his facemask, Captain Pinhorn, Space Force, looked disgustedly at Pierre Ferenc, U.O.P. Water gurgled away beneath their feet and the air-pressure dials on the metal walls showed that they were still breathing at twenty-one atmospheres. When you live six hundred feet under the sea there is little point in going through decompression chambers every time you climb out of the water. Pinhorn gave a little shiver and wiped his face off with a paper towel from the dispenser. Ferenc's classic features received a perfunctory wipe of his hands.

"It's all very well for you chaps who live and work down here," Pinhorn said protestingly. "I've got a job to do. I came here—"

"—especially from the Moon on important Space Force assignment," Ferenc finished for him. "I know, Pin, but what can I do? You've seen the gov'nor. Now we wait until this Grosvenor guy arrives."

"Well, he's taking long enough," grumbled Pinhorn.

Both men walked through to the mess; in the warmed air they neither needed or wanted any more clothing than their

swimming trunks. Simon Hardy bustled in, jerking his amputated left arm, smiling, talking energetically, trailed by Minister of Aquiculture Werner.

"So you see, George," Hardy said non-stop with a quick nod of his head to Ferenc and Pinhorn. "If we round up the northern whale herds early in the season it means we have a better chance of saving more calves from the scavengers, the killer sharks—you know what goes on up there just as well as I do. We're losing far too many head of whale for my liking."

"You were only saying the other day, Simon, that you didn't have the personnel—"

"Fiddlesticks! Of course I haven't the personnel! It's precisely because of that that I want to round up the northern herds early. I'll use all the rangers on it, then they can all move south for—"

"For your own damn pet schemes, eh, Simon?" said Henderson, walking in with a smile, and a camera slung round his neck. His body shone with water; old he might be, like Hardy and Werner, but, like them, he was in the pink of condition. He flung a small harpoon gun onto a side table. "You want to use those men to ferret around in the Juliana Trench, right?"

"Too right," growled Hardy. He sat at the table and picked up his Nelsonian knife-fork implement. "We've got to lick whatever it is lurking down there."

Pinhorn's ears pricked up, and his face assumed the blank stare of a man listening avidly whilst concealing that fact lest his talkers should realise his presence and keep silent. Anything he could learn about Under Ocean would be of great interest to Toxter of the Space Board. Pinhorn knew well enough the continual bitter battle for appropriations that went on in U.N.

Werner was speaking. "I agree that it would be desirable to carry out the round-up early. But this other business—" He shook his head doubtfully.

Henderson began eating with relish. Waving a fork in the air and using it to stab each punctuation mark, he said: "Now look here, Simon. We've got to thrash this out. We three here put aquiculture on the map. Oh, I know others talked about it for years; but we three did it!" His voice carried persuasion. "We have to stick together, put a combined front on our actions, show U.N. that we mean business." He glanced keenly at

Pinhorn. "I'm sure that Captain Pinhorn will not take it the wrong way; but we all know that Space and Ocean are in conflict under our blessed system that is inevitable. There just isn't enough money and material to go round."

Pinhorn inclined his head. Any remark would be superfluous.

Hardy broke in: "That means that we have to safeguard our own interests." His eyes narrowed on Pinhorn. "I don't want to sound vicious; but don't you think it would be a good idea if we refrained from discussing this with a Space Force Officer present?"

Immediately, Pinhorn rose to his feet. Henderson put out a hand and pressed him back into his seat.

"Go on with your meal, captain. What we have to discuss will soon be no secret from the world, let alone from Space Force Intelligence."

"You mean you're releasing the news?" demanded Hardy.

"Well," Henderson temporised. "It's this way, Simon. I'm not at all happy about the way in which Under Ocean has been running lately. You and I and George share a common ideal, the opening up of the seas of the world for the good of humanity. But others don't see things that way. I mean some of these pettifogging little Bishop Wilkins Corps! We all know what goes on. Men press-ganged from seaside resorts, taken up at sea, even trapped in inland towns. Turned into slaves. And the internecine warfare that goes on between the companies, raids and counter-raids, emphasis on profit and easy living instead of getting the most out of their concessions. I'm sick of it all!"

"Aren't we all!" Hardy said hotly, banging down his knife-fork. "But the system is running now. It's in full swing."

"And if we tried to change it in mid-stream," said Werner, his mouth full, "we'd have the biggest famine the world's ever seen on our hands."

"But we're going to change it," snapped Hardy.

"That's right, Simon." Henderson picked up a fish bone and nibbled the meat that tasted like chicken. His tones were deceptively soft. "But how do you propose to do that?"

Pinhorn's attention darted between the diners like a dragon-fly over a clump of flowers. He was stimulated, aroused—these men were alive, vital, almost as good as the spacemen he knew so well. His food lay before him untasted.

"I'll tell you how," Hardy said violently. "Give me more men, more equipment, more subs. We'll move in on one of

the biggest undersea farms and break the system there. Then we'll prosecute in camera, and move on to the next."

"How long will it take, Simon?"

Hardy lifted his attenuated left arm and stared at it as though it had just happened. "Hell of a while."

"Precisely." Henderson put the fish bone down. "Right. Here's what we do. And we'll need Pinhorn here's help. We do just as you said before, Simon, in connection with the Juliana Trench."

"The Juliana Trench! But you vetoed that idea before. After I said I wanted to broadcast it to the world you said that plan was utterly impracticable. Now what?"

"Just as you planned, Simon. But with one big difference. Since I've been down here in Trident I've been mooching around—you know, browsing here and there, talking to officers and men, finding out all kinds of little things that I couldn't pick up stuck there on top of that damned U.N. skyscraper. And they all add up to just one thing."

Werner stopped eating and looked expectantly at Hardy. Pinhorn guessed that he was awaiting the crusty old undersea fighter's reactions to the coming bombshell.

Around the table, neatly set with its silver and plastic, the tension screwed up; Ferenc lifted his head to stare at his chief and then, slowly to turn and look at Henderson. Pinhorn waited impatiently. Somewhere a messman dropped a plate and the clatter served as a gong, announcing the curtain.

Henderson said: "Have you ever thought just who or what this thing is in the Juliana Trench, Simon?"

Hardy let out a gust of air.

"Well, of course! Deep-sea currents, probably. But I still think that my idea of some antagonistic life-form down there has a strong basis of truth. There just might be. We saw pictures of vague forms, outlines, something, when sub Nine went down."

"Didn't they say someone was knocking to be let in?"

"Well, you know what could happen to men's minds under the strain of that sort of situation."

"But I think they were right."

"You—what?"

"I think, and my observations here lead me to suppose that I may not be far wrong, that a life form lives in the Juliana Trench." Henderson paused. Then he said slowly, with quiet chilling, emphasis: "A life form with intelligence."

A little babble of talk burst out round the table. Pinhorn felt a roaring in his ears. Ferenc was sitting, his face chalk-white, his hands gripped into fists. Werner's eyes were fastened like two remoras on Hardy's face.

Henderson sat back and pounded the table with his knife. He was smiling now, a genial, friendly smile ; with all the coolness in it of the water under the North Pole.

"Gentlemen. That is only half the story."

Silence.

Henderson looked squarely at Pinhorn.

"Captain Pinhorn, Space Force. When you report the subject of this little conversation to your superiors, or to Mr. Toxter, would you kindly add that Henderson, of Ocean, also thinks that the intelligent life form living in Earth's own ocean did not originate on this planet ? "

Mr. Grosvenor, anyone could see at a glance, was a very worried man. Very worried indeed. He sat in the speeding flying carpet watching the ground unroll beneath the pulsing jets, and beat his fingers on his thighs in unconscious rhythm with them. His personal pilot, up front, did not look round, although Grosvenor had the irritable feeling that the fellow knew just what was going on in the rear of the craft. The ducted fans whirled merrily beneath his feet, spewing air downwards and lifting the ship so that her jets could hurl her through the air at better than four hundred miles an hour.

They were heading directly into the sunset, and umbra and ochre burnt all along the horizon.

Air ! Grosvenor hated the stuff. His skin felt itchy, his eyes burned and his throat ached. His skin was covered with sweat and he had torn off his collar and tie and flung them beside him on the seat. His nervousness smelt.

What did that shark-bait Hardy want, anyway ? Who said he had the right to demand that Grosvenor should come to him ? Ever since Arthur Dodge had died there had been nothing but toil and trouble, and when his secretary, Elise Tarrant began getting ideas of her own—well, that had been the final humiliation. Grosvenor was not prepared to truckle to any pipsqueak little miss just out of pigtails. Mind you, she was quite a dish—Grosvenor moved his fat shoulders against the backrest and dwelt for a moment on the contours of Miss Tarrant—quite a dish. He rubbed the nose that had been sculptured by a whisky bottle, used internally, and tried to think of more pleasant

things than either Simon Hardy, Elise Tarrant or that stupid Space Force Commander Dodge. Trust a rip like Arthur Dodge to have a dimwit for a nephew.

The thought of the unanswered letters to Jeremy Dodge was a sore point with Grosvenor. If the fellow had even offered to call in the police—or the U.O.P.—Grosvenor would have understood and got a line on the man's make-up ; but dumb, insolent silence, ever since he'd landed on the Moon—well, Grosvenor had known what to do then, all right.

The flying carpet swooped down towards the coast.

Soon now and his private sub would be taking him out to U.O.P. Base Trident and Admiral Hardy with his white helmet of hair and hard teakwood face and stupidly flapping left arm. And Mr. Grosvenor's face muscles tautened and his fingers beat a distressing tattoo on the seat.

If only he knew where Elise Tarrant and young Dodge were now ! If only he knew where the hell they'd got to !

XI

One thing Sally wouldn't do was go near the bell hung round Dodge's neck. Apart from that, she was the nearest—and dearest—thing in Dodge's life. He recalled that they used plain ordinary bicycle bells up near the surface to call the fish come feeding time ; down here there were all manner of electronic devices. Dodge had quickly found the power sources of the undersea world. There was one hydrogen-power station, sited in an immense sunken mountain, and taking up nearly all of it with the shielding needed to deal with the colossal temperatures raised. Most everyday power was drawn from underwater river turbines.

He'd been incredulous at first, but had soon found there were mightier rivers beneath the sea than all the Amazons and Congos and Niles of the upper world.

As an interesting example of the method of the Bishop Wilkins farming fraternity—they were told at lectures that any slave who allowed himself to be caught in an upcurrent and washed too near the surface would be dealt with in the poisons tank. Dodge had seen this horrific contraption once, when he'd been ordered to take a message capsule to a guard stationed there. The tank was filled with a varied and nauseating collection of all the poisonous fauna of the seas, ranging from fire coral and jelly-fish up to giant sting rays.

Luckily for Dodge's nerves and stomach, no poor devil of a runaway slave had been tossed in whilst he was there.

He had an irrational and soul-destroying fear of the stone-fish, the killem-on-the-spot kid of the coral reefs. Like all underwater menfish, he disliked touching exposed coral walls unless he knew exactly what he was doing. Even so, at the end of the shift's work the menfish usually formed a cursing, complaining queue at the first-aid room, having cuts and abrasions disinfected and plastic skin sprayed on. In salt water you didn't notice the sting of a cut when it happened ; Dodge had often been surprised to find gashes and scratches on arms and legs when he got back to his cell.

One of the biggest queries of all was just exactly where was he located on the globe ? The query, posed nakedly like that, might have aroused ribald mirth among the guards. Not that they knew where they were, either : but their answer, with a curse and a blow, would have been : " You're in the sea, slavey. In the sea ! "

It was useless trying to judge where they were by the fish.

Man had carried out as drastic a domestic upheaval in the sea as he had on land ; greater, if anything when the ease of herding animals in a medium that was interrupted neither by mountain ranges nor ocean barriers was fully appreciated. The strongest and most persistent information Dodge received scrawled on slates late at night in the cell blocks was that they were somewhere in the South Atlantic. He had nothing by which to judge the accuracy of this, his knowledge of the undersea world in a comparative sense was nil ; and, to counter-balance the South Atlantic theory, were other guesses—South Pacific, Timor, Indian Ocean, even a wild and almost frivolous suggestion of the Red Sea.

Privately, Dodge leaned towards the Caribbean.

He'd been worried recently by a peculiar singing noise in his ears and had been to see the medical officer who had questioned him sharply, suspecting a malingerer, and then, after a perfunctory inspection, had packed him off to work with a stern admonishment that further sick parades were functions he would do well to steer clear of—for reasons of health. The oddly disturbing drone in his ears persisted. He wondered, not without a pang of fear, if his eardrums were succumbing to the underwater life of continual changes of pressure. That his internal pressure balanced the outside water he knew ; that the human cell, being nearly all water, was virtually incompressible he also knew, that

sea water was so like blood that in some special circumstances it could act like blood he knew, too ; but none of that served to cheer him up. His ears still ached.

Among the other menfish with whom he worked and shared his days was no-one he could really find it in his heart to be friendly with ; the sad experience with Harp he thought had cured him of sentimental attachments of that sort. He could not bear to think of Elise ; he consoled himself in silent communion with Sally, his little glittering pilot fish, and found nothing strange or pathetic in the situation. At least, fish don't have tongues, and Elise had been mighty free with hers.

The classic remedy for painful ears, swallowing to open the Eustachian tubes, was useless when you breathed water—for one thing you didn't need to keep opening them when you lived permanently undersea.

At last, he communicated his ear trouble to a fellow slave in his group. He scrawled quickly : " Ears hurt."

In shaky almost illegible writing : " Hurt ? Or noises ? "

Disturbed, and strangely excited, Dodge scribbled : " Noises." Then he added : " Singing."

" I know. Me too. Lots of menfish."

" What is it ? "

" Don't know."

And that was where he had to leave it. It wasn't a pain. It did not inconvenience him at all, and, now that he thought about it, the doctor had not appeared in the least surprised. He must have had many such complaints. It was just an occupational disease.

And then, one day, a miracle occurred.

Rather, two miracles ; the second more wonderful than the first.

For some time Dodge had been aware that he was regarded with some favour by his foreman and although the feelings aroused in him were a mixture of repugnance and hesitant hope, he did nothing to hinder his own advancement. But when he, and another score of menfish he did not know, were paraded under armed guards and flown to a warm water filled niche on the inner face of the reverse scarp, facing the shore all those miles away, and were told what was expected of them, a wild elation surged through him. He was being offered the chance to carry a spear. He was told that he could volunteer—ironical

word—to join the martial forces to combat the predators ravaging the outer rim.

Another boss from the one who had first talked to him handled his words with semantic care. They were being given this chance because they had proved good reliable workmen. Their food ration would go up. They would have better quarters. They would wear heated armoured scale suits. They would become members of the élite—after a little probationary period, of course. This was the first step on the ladder of promotion that would lead to the operation that would enable them to breathe air again.

The last, no-one believed.

But the opportunity of better conditions, different work from the soul-destroying menial labour of the fish pens and the seaweed groves and algae beds, acted on them like a tonic. Knowing that he was a gullible, rather contemptible fool, Dodge accepted. He was given a slap-up meal, issued with a suit of armour and given a couple of hours' instruction with a ten-foot spear. The first moments with the weapon aroused a maelstrom of emotions within him. He was aware of the watchful guards, like sentinel sharks, scanning all the volunteers, their harpoons ready. Suddenly Dodge was filled with the desire to go on-living; it shook his whole body with a violent spasm; he would go along with these lordly overseers and bosses, play it their way, until the time came for the reckoning. Meanwhile, he practised with the spear at towed targets, learning the knack of leverage and control of thrust, learning to hurl the lance with the minimum of effort and maximum of control. He became an expert pikemanfish. And every savage thrust with the weapon he stored up in the barrel of hatred that curdled in his breast.

Very soon after that they were flown out to the outer reef and on the way the second and greater miracle came to pass.

Dodge had caught his spear in a clump of widely branching coral and had lagged behind the others to free it. Their tow—a large and docile nurse shark—swam lazily on into the blueness. Edible fish were never used as beasts of burden or as carriage animals except on rare occasions; and the menfish slapped sharks and swordfish around as though they were donkeys. Dodge gave a sharp jerk; but the spear remained entangled.

His little bell around his neck, symbol of the slave, had been removed when he had joined the ranks of the soldiers, and he had been issued with a bicycle bell which was worn strapped to the right arm. A simple code of signals had been taught them.

Now, Dodge rang to say he had been delayed. The sergeant in charge shouted back to follow as soon as possible. So they trusted him, then !

Not that there was much trust about it. All around them was the busy life of the undersea world, menfish coming and going, finning along on various errands, orderly shoals of fish being driven from pen to pen, inquisitive sharks nosing everywhere shouts of overseers, the flash and glint of fins in the lights, the grumbling crunch of sundering coral as fresh beds were cleared. Just the working activity carried on every day in the inner baileys of any Bishop Wilkins undersea farm, in the bell-haunted deep.

By the time Dodge had the spear free and started finning after the others, he had decided to take his time. There had never before been opportunity to wander at will among the fairyland of grottoes and trailing seaweeds and clouds of tiny, brilliant fish. Always, there had been the prod of authority, emphasized by the sharp spear point. Now—he carried a spear. He turned on his side and slanted down a long coral wall, aware of the danger he was courting and scarcely bothered what the sergeants would say—the wonder of freedom had gone to his head, he felt intoxicated with it.

He knew nothing of the scientific terminology of the fish and other animals of the sea ; the slaves had their own vocabulary of names, most obscene, some funny, some the only obvious ones—as one funny little fish that had a square body, with eyes, mouth and tail apparently stuck on at random, which could be called only a box fish. There was the hula-hula fish, a graceful form with waving transparent fins.

When, in the yellow light from a pendant globe, Dodge saw the little burst of scarlet, he knew at once what it was. Looking like a firework display, the fire-fish extended its long poison spines, barely moving in the crevice of coral beneath Dodge's fins. Before, when any dangerous creature had been met undersea, he had had to call for help. Now—he gave a savage thrust with the spear, impaled the deadly fire-fish and watched stony-eyed as it died. A little blood tufted away in the water. Two sharks nosed up as Dodge scrubbed the dead body from the spear against a branch of coral.

He turned his back on them and flew off, along the sunken wall, entering regions he had never previously visited.

An odd feeling buzzed in the back of his brain. Understanding flashed so quickly that he jerked to a quivering halt.

Sally, flung unprepared from his pressure wave, circled glittering, as though admonishing him.

However viciously atavistic had been the feeling when he'd killed the poison fish, it had released a valve in his mind that had been jammed. However unpleasant the truth, he had to face the fact that he felt wonderful now that he was no longer the lowest creature of the low. As a slave, there had been no-one in a worse situation than he. Psychologically, there had been nothing on which to unload his own angers. Bad, cruel, wrong, completely primeval it might be ; but killing the fire-fish had given him back an interest in life—in his own life. It was Nature's law—whatever the do-gooders might say.

His own psychological reactions were in some outré way similar to the cycle of life in the depths. The plants living only in the upper sun-reached waters produced the first link by photosynthesis, and gradually, as the animals living on the plants and on each other grew larger, the food cycle was carried on, with the falling detritus on which the benthypelagic fish eked out their existence in turn being swept by upward currents back to the continental shelves.

Sally cavorted around him, darting past his face and body like an excited dragon-fly. Dodge chuckled. He felt now that life would open up, that there would be a way out of this whole mess ; he wagged his spear and flew on along the wall, angling to reach the assembly point on the rim. Beyond that dividing line between the shelf and the deep sea, out in the blue, who knew what opportunities might not arise ?

A warmly glowing radiance turned the atmosphere emerald green ; as he flew nearer the light turned yellow and he saw it fell from a long row of round portholes in the nearly vertical lichen-covered rockwall. Interested, he turned to fin closer. Sally backed off, flickering her golden fins. Screwing up his eyes he could see through the portholes rooms, corridors, a whole undersea city. It reminded him vividly of the Blue Deep Hotel, back there in the safety of shallow coastal waters.

Like the Blue Deep, this hotel, too, looked as though it were air filled. Dodge could not be sure. His excitement at the discovery grew. This must be all reserved area, places where the menfish slaves were not allowed. Now he could see why. This must be where the bosses lived, the men who were not menfish, the men who ordered and controlled and employed the miserable

slaves like himself. Angrily, he struck with his spear at the plastic.

Reaction was prompt.

A woman wearing a pair of shorts and a brief jacket walked idly across, pressed her nose against the glass. She saw Dodge, hanging there in the water on his fins, and her excited signals brought other women crowding. They stared like fish in a tank. The truth shook him. He was the fish in the tank, he was the prisoned captive of the aquarium. These people could breathe air—they had millions of cubic miles of it to breathe above the surface of the world. He began to make faces at them and they laughed, delighted.

He inched along the row of portholes, peering in, chained there by a growing curiosity. He would not allow himself to think. The women followed him until a wall barred them from the next porthole. Inside that one two men lay asleep. He passed on, flicking his fins quietly.

When he saw her at last he leaned his forehead against the transparent plastic and looked for a long while.

She was sitting in a bentwood chair her head sunk in her hands elbows on a wooden table. Lura, the little Siamese girl, was asleep on a bed. Their room was nothing but a cell and Dodge could see the bars, high up on the door.

Gently, he tapped his spear against the porthole.

There came no reaction from the girl at the table. Dodge pulled the harpoon back to strike again and a shadow glided between him and the window. A large shark, attracted by Dodge's movements, had wandered over to investigate. Its tiny brain, housed in a cartilaginous sheath, its stupidity and bumbling inquisitiveness infuriated Dodge at this crucial moment. He banged the shark over the head with the butt of his spear and the frightened beast swirled away and vanished in the blueness. Dodge, breathing heavily, hammered on the porthole.

Elise lifted her head listlessly, no doubt accustomed to fish and men banging on her window, looked out—and saw Dodge.

The crystal magic of that moment contained a depth of feeling and meaning that Dodge could not encompass or understand. They looked at each other—the enchanted moment extending indefinitely as though they mounted a silver stairway under a haunted sky, and through all the roaring in his brain there was only the pale face of Elise in all the world and nothing else at all—nothing else at all.

There were vivid yellow and violet anemones clustered round the window and trailing seaweeds vibrated gently across the pane. Tiny fish, no larger than postage stamps, fluttered like wind-tossed confetti and from beneath a coral overhang a blue crab with magnificent intaglio designs on his shell snapped his nippers merrily.

Elise said : " I thought—You're all right ? " Her voice came, soft and musically muffled, through the window and the sea. Dodge nodded his head. He formed words with his mouth, laboriously, anxiously.

" You—all—right ? "

" Yes." She passed a hand across her forehead. " Oh, yes, we're all right here. Treated like lambs for the slaughter." She tried to smile. " So far, we've held out."

Dodge thought : *Thank God.*

He mouthed : " Escape."

He repeated it, and then Elise said : " No hope of that, Commander, no hope at all. Lura and I tried and didn't get as far as the airlocks. No-one seems to know where we are—it's all my fault." Her face was ghastly.

Dodge shook his head. He rapped peremptorily on the window. " Not—your—fault. We'll—get—out." How, was another matter, with the impenetrable barrier between them of air and water. Beyond Elise's shoulder he saw the door open and simultaneously the Siamese girl leap from the bed and fling herself at the handle, struggling to slam the door. Elise swung round, one hand to her throat. Dodge stared, horrified.

The door shuddered, then wrenched inwards. Lura dragged on the floor. A man shouldered in, a slender man with an unpleasant weasel face and yellow uneven teeth. His blubber lips lifted in a grimace as he saw Elise standing there, rigid, one hand half outstretched before her, the other at her throat. For some reason he could not explain, Dodge had flung one hand before his face, shielding it, so that he stared at this arrogant rodent-like man through slitted fingers.

Weasel-face saw Dodge, floating there outside the porthole. His face went mean. He rushed forward, shouting something obscene, clawing for Elise. Dodge had a quite distinct sensation of boiling-oil engulfing his guts. He was quite helpless, quite useless to Elise. He could only lie supinely outside and watch through undimmed eyes what went on.

Then a curtain whisked across the porthole and Dodge was staring at a ghastly pale face, with waving tangled hair, twin

head lamps mounted above the forehead and with glaring, hating, bestial eyes. He recoiled involuntarily, lifting the spear. The face vanished, and Dodge realised that he had very thoroughly frightened himself.

A single shriek came through the water from the room beyond the curtained window, a single cry cut off sharply.

Co-incident with that abruptly stifled cry of : '*Jerry !*' there was a brittle twang in front of Dodge. A long steel harpoon grazed the porthole rim, shearing away branches of coral. Dodge whirled. Two men with breathing equipment were diving straight for him. Men with facemasks and respirators, and three tanks on their backs, men with harpoon guns, menacing and brutal. Dodge was just a manfish ; he laughed at the two clumsy invaders of the underwater realm, flashed past them, twisted, out of their range of vision, and quite callously reached out with the spear and twitched off first one's breathing apparatus and then the other's.

He felt nothing as he did this. These were the animals who had captured Elise. These were two less menaces she must face.

He didn't even bother to wait to see them die.

Nothing now must impede his attempt to get inside where he could be of service to Elise. He flew frantically along the wall, seeking for a door, an air lock. After a few moments' frantic search, the very name of what he was seeking brought sanity. *Airlock !* Of what use was an airlock to a manfish who breathed salt-water ? He choked on the bitterness of it. Very well, then. He would go about this some other way. He would be the very acme of brutal overseers, the very pinnacle of filthy overlords. Then—he would deal with that weasel-faced punk. Or, perhaps, it would be better to escape ? The cold water story had long since been exploded as a myth to fetter new slaves. Escape, find the police, someone—U.O.P.! And then come back for Elise. She might be for ever denied him ; but at least he could return her to the land and the sunshine, away from this ferocious underwater world of darkness and death.

His thoughts were like interplanetary debris, for ever chained around a central fact—he returned time and again to Elise and her fate. He finned along as fast as he could, angling back into familiar waters and streaking for the assembly point on the rim.

He arrived just as his sergeant was blowing off steam. Dodge rang his bicycle bell for '*All right,*' showed the spear and signed that he had killed a fire-fish. That mollified the sergeant. The

group joined others similarly accoutred and passed into a crevice in the lip of the rim. Below lay the blackness of the deeps.

Dodge forced himself to be calm, to obliterate from his mind the searing memory of the last few minutes. Of course, he couldn't. The vision of Elise's face again and again came between him and the lichen-covered walls of the ravine. Three times he almost ran headlong into spreading coral umbrellas. He had to come to grips with himself, with life as it was happening now. He would be of no use to Elise if he wound up a water-logged corpse. Making an effort of will that demanded every spark of courage and determination in him, he shut his fears and terrors and hopes away and concentrated on what he was doing.

For they were heading down into dangerous waters.

XII

There were perhaps fifty men in the party. Led by hard-faced sergeants, armed with long spears, twin headlamps giving them a horned, toad-like appearance, shooting with lithe ease and grace downwards in a sinuous line, they ventured into the depths, true representatives of Man. King of the Beasts.

At the first halt on a sandy bottom whose silvery colour was washed out already into a spectral grey glimmer, the men formed a half-circle around the group-leader. Dodge knew only that he was called Captain Kitser. His face was seamed and slashed by a lifetime of underwater exploration; his every motion had the fluid grace of a hunting fish. He raised his repeating harpoon for attention and looked deliberately around his command.

"All right. Most of you are new to this game. It's my job to stop you from being killed, and to show you how to kill the enemy. The last is a pleasure, I assure you." He adjusted his throat microphone. His voice boomed out, filling the rocky cleft. "I don't know what fantastic stories you've been hearing up there; guff about gigantic sharks and killer whales and I shouldn't wonder. All right! Forget all that! That's the same sort of nonsense as the story about the coldness of the sea. We're down here to do a job. A simple job. A soldier's job."

Dodge had tensed at the blatant mention of the cold. So these men around him were very definitely of the élite. Either they weren't expected to try to escape any more, in search of the promised rewards; or—they were expected to be killed. Dodge gripped his spear rebelliously.

"The company that employs all of us is not a charity institution ; we give a day's work and we get a day's life. All right. But other companies don't have the same idea. They send along brigands to steal our equipment, kidnap our workers, even our herds are not safe. All right ! We're going to put a stop to that !". He paused and glared around. Dodge reckoned he was putting on quite an act. Most of the men around him, who, until a day ago had been slaves like himself, must before that have been clerks, shop-assistants, travelling salesmen, sports instructors, diving exhibitionists. There were no fishermen in the seas of the world any more. All the sort of men to be impressed by the curt military command technique. Dodge, though, had been a commander in the Space Force. Until Elise had called him that he'd quite forgotten. His memory and brains were getting water-logged. Captain Kitser thumped on.

"All right ! We have a patrol area. We patrol it. There will be one shark mount for every two men. You will be shown how to control them. And look after them, they are company property. Any man losing a shark will be charged for wilful destruction of company property. All right !"

So he went on, outlining their duties. They were to form a picquet line and spot any raiders, call up the heavies, the tiger-sharks, the fish-drawn artillery, the swordfish cavalry, the subs with their undersea weapons. In any battle that might develop they would be permitted to thrust their spears into the bellies of the enemy ; but Captain Kitser really felt that they'd be better occupied getting to hell out of it. The men agreed—heartily.

Captain Kitser wound up : "You've become accustomed to life in the upper levels over the continental shelf. It's no secret that this particular section is quite shallow. When you dive deeper, into the open sea, you'll meet a far different sort of fish from those you knock about up there. You'll meet sharks that don't turn tail when you put your fingers to your nose ! So watch it ! You'll draw food and extra power-packs from stores here. There will be a screen of watcher-fish and guardians, and asdic will be alerted at all times. We hope to spot the raiders before they get in too far. We hope. All right !"

Dodge felt that if he had to ring his bicycle bell for 'All right' he'd burst out laughing.

By the time he had fully equipped himself he felt like an Alpine climber. Power pack on back for his heated suit of armoured scales. Power packs for the headlamps. The lamps

themselves, bulging over his forehead. A food knapsack. A large wooden-handled bronze bell with clapper tied down for use in emergency. His spear. A large searchlight with immensely thick plastic lens to withstand pressure, equipped with wings and tail. Power packs for the searchlight. All this, plus himself, hanging with a comrade from the sandpapery side of a large dopey shark. The controls were simple. A pair of reins, and a second pair for vertical movement. Dodge took a quick look at the beasts' heads and saw the tough skin disappear beneath a slightly smoother covering—those damned plastic covers, like the one he had seen lying by that dying mother shark !

Sally came along for the ride.

The men spread out into the water. The blueness was omnipresent now. The familiar scene of the higher levels was gone ; there were no comforting lamps studding the floor—there was no floor, only the blackness extending downwards to the pelagic ooze perhaps twelve thousand feet below.

They'd been told that the watcher-fish and the guardians were out there to their front for one very good reason ; they effectually prevented escape. Dodge and his companion, a strongly built, fair-haired Nordic type with blunt, open features and still the remnants of a once-ready smile, who called himself Knut, were carried by their shark along their beat many times. The darkness of the water grew, and Dodge guessed that when the sun set over the surface and the deeps became black and impenetrable and hostile, would be the time for extra vigilance. He was remembering the horror stories of the menfish. Octopus. Barracuda. Electric eels. Killer whales. All very stimulating to a manfish patrolling a beat through the cold waters hanging over a twelve thousand foot gulf.

Captain Kitser came by, lying on his stomach on a skate. The metal hydrofoil had a store of compressed gas beneath the body and ejected it through steerable jets from astern. A transparent water-screen curved in front, with a powerful gun poking through. Kitser operated the brake and a parachute flared open, halting him in the water, and closing again on springs. He made a quick adjustment to the buoyancy tanks and floated.

"You !" He pointed at Dodge. "Back to base. This to Lieutenant Hung Soo. All right !" He thrust over a plastic tube, a message container. With a bubble of gas, the skate skidded on bearing Kitser along the picquet line.

Dodge disengaged from the shark, left Knut there, and flew to base. At the end of the ravine, leading down from the edge

of the scarp, had been built a command post. Here Dodge flew in a round opening, blinking in the lights, and found Lieutenant Hung Soo. He handed over the message and at a sharp command to wait finned slowly off to a corner, propped himself in the angle of the walls and began to eat a snack. His eyes roved round the command post.

The main item of equipment was the huge radar screen occupying one complete wall. Then Dodge realised that it wouldn't be radar, not undersea. Ultra-sonics, of course. Asdic. Or, as they were calling it these days, Sonar. It was laid out like a radar screen, with concentric circles radiating from a point representing command base. The mass of coloured chips of light would be his comrades, the picquet line was quite plain and the restless speck would be Captain Kitser on his skate. Dodge counted heads and stopped when he came to the fleck of light that was his shark and Knut.

The edge of the scarp showed like a coastline. They had the scanner set for a narrow band at approximately the same level, there were no upward or downward sweeps which would have shown the scattering layer and mysterious shapes lurking in the depths. Dodge wondered, when Kitser's voice came over the sonic speaker, what the message had been about. He saw men-fish busily scribbling away at desks and guessed that they were preparing maps or situation appreciations. Certainly, vocal communication was far quicker than a simple soldier's best flying time. Dodge was getting back the feeling of science, of technical marvels, realising with a sour thrill that this was what he had been missing since losing space. The room was full of orderly activity. Come to think of it, it wasn't unlike the bridge of a space cruiser when action was imminent—and then Dodge saw the action develop, perfectly able to follow it on the screen.

Cheeps of alarm came from speakers set high along the walls. They would be the watcher-fish, equipped with echo-sounders. The lines of light on the screen, converging towards command base, developed with indecent swiftness.

The killers were closing in. Excitement gripped Dodge. He could view all this with detachment. It wasn't his battle. Orders were being given over the sonic transmitters. Lieutenant Hung Soo turned to see Dodge, jerked an angry fist, shouted: "Don't worry about that answer, soldier. All hell's breaking loose. Get out there with your spear, fast. We need every man."

Dodge thought: "*All right!*" and finned away.

A round door that had been closed when he had passed was open. Inside he saw rows of menfish busily working away at what at first glance looked like multibank typewriters. Above were oscillographs with wavering green lines looping ceaselessly. A chittering noise of squeaks and whistles filled the atmosphere, a noise that was like a magnified echo of the noises that sounded all the time in his own ears.

Then a manfish with orange armour prodded a spear across his face and the door rolled shut.

Thinking about that, Dodge flew off towards Knut, his shark and the battle. He never reached them. Gliding out he had to tread water frantically to allow a battery of fish artillery to thunder by, the fish striving forward with violent lunges, the syringe-shaped cannon streaming behind and fish-mounted men flying all around. Expectantly, he looked and saw the plastic-cloth banner flaring on the lead fish—guidons into action !

He was tossed up on the wash of water and then, sinking down again, started off, avoiding a two-man sub with externally lashed torpedos, and rounding the bubbling wake to see Sally go whirling helplessly away in the wash of water. At once he turned and finned hard after her. In a few moments he had caught her, she had vectored up on him, shivering her golden fins, glittering in the light, and they both joined the throngs moving towards the deep blackness outside. He wouldn't like to lose Sally now.

Somewhere that damned brass band was playing again. This time it was excerpts from 'Tannhauser,' the 'Soldiers' Chorus' and even, so help him, 'The British Grenadiers.' Some disc jockey was putting his heart into the struggle.

The lights left behind, he turned to parallel the scarp and join up with his section. Away out to his right lights were flickering uncertainly : if that was the watcher-fish line, then it was being pushed in pretty deeply. Dodge felt a fierce desire for this fight to be over, for him to get back to the farm and see what he could do to rescue Elise. Menfish straggled past him, going from right to left. In an odd patch of light he saw blood staining the water. It floated like sooty clouds. A crazy shark swept past, half its tail missing, its guts trailing. A dead manfish bobbed with mouth open and eyes glassy.

Dodge began to feel panicky. He quelled that before it reached his higher brain centres and tried to think things out. The water was quite dark now. Emerald green lights here and there merely emphasized the inky blackness between. Visibility was down to a hand's breadth. Shouts and screams came clearly

through the water. Dodge periodically turned on his back and checked the area to his rear, then doubled back and went on, spear at the ready. A line of menfish, their armour torn and blood drifting away, went finning madly past him. He saw a floating syringe cannon drifting sluggishly.

Sally was worried. She kept darting away and then fluttering back. Dodge could almost sense her near hysteria.

He heard a dull concussion. He saw nothing, but the next instant a gigantic padded fist had thumped him in the chest. He gasped, retching. His ears ached. Somewhere a sub had exploded.

More menfish straggled past, their lights a weaving uncertain pattern of panicky will-o'-the-wisps. Armour glinted. So the soldiers, too, had been beaten. He was not at all surprised when Harp flew up, spotted Dodge, and curved back. This, he had been expecting with one segment of his brain. Harp's arm was gashed, the bloody bandage little use surrounded with sea-water.

Dodge thrust his spear forward, baring his teeth. When he couldn't say what he felt, that was as good a way as any of showing what he thought of Harp. Harp smiled weakly. His throat worked convulsively, Dodge heard the swallow over the amplifier.

"I guess you feel sore, Jerry. I'll tell you all about it later. Had to do it, for all our sakes. Now, we'll have to get the hell out of here. There's something out there that's mighty bad medicine. Yes, sir."

And, again, Dodge wasn't surprised that he believed Harp. He nodded, once, and pulled the spear back.

A fish swam quickly into the lighted area from their headlamps. A long, slender fish, perhaps seven feet from snout to tail. It reminded Dodge of a Zeppelin. The mouth curved down and the eye was round and large. It hung, poised, and half opened its mouth. Dodge saw the teeth, needle sharp, long—the mouth was a wedge of cutting ferocity.

Harp aimed his harpoon and sent the shaft directly into the fish's head. Then he turned and began working his flippers like a madman. Frightened, Dodge followed.

The fish had been something deadly. He had never seen its like undersea before, that long, slender silhouette, with the classic grace of the perfect underwater form. He caught up with Harp. Harp glanced round and went on finning.

His words were chopped, short, brutal.

"Barracuda. Hundreds of 'em. Coming in in droves. Being beaten in as a screen for the raiders. Blood mad, all of 'em. Gotta get back to command post."

Dodge realised at once that this was the opportunity for escape. He could fly away now, unwounded, rise up to the higher levels, get clear off. The barracuda would follow the wounded menfish into the ravine for the final struggle.

He looked upwards. There lay freedom.

Then he remembered. Harp, with a wounded arm and the long haul to command post. Elise, penned in that prison. Ironical—escape under those circumstances. He tried to think clearly, to make the right decision.

Sally swam frantically past him, went streaking ahead.

A long, slender shape followed. The barracuda aroused a choking feeling of utter revulsion in Dodge. All that beauty of form allied with the insensate ferocity of that expression—those teeth . . .

He looked around. Harp's blood stained the water.

In light from a drifting globe he saw the sea behind him full of the darting shapes of barracuda. The sea boiled.

No use thinking of Elise now, or of Harp, or Sally. No use thinking of escape. No use thinking of anything . . .

To be concluded.



Possibly my favourite fantasy magazine of all time was the late, and ever lamented, *Unknown* (later titled *Unknown Worlds*) and one of its earliest novels, remembered more for its drama and grim logical ending rather than its literary quality, was Norvell Page's "But Without Horns" (preserved, incidentally, in hard covers by Martin Greenberg in his *Five Science Fiction Novels*). Its theme was *homo superior*, bitterly but uselessly opposed by *homo sapiens*, mainly because the emerging super being's weapon is mental compulsion and his outlook, for some peculiarly deduced reason, completely amoral with the immediate aims of self-aggrandisement and supreme power. Frank M. Robinson's *The Power* (Eyre & Spottiswoode, 11/6d—their "Thriller of the Month") covers the same ground, and the pleasure normally guaranteed by this type of fantastic thriller was somewhat diminished for this reason. Annoyingly, too, the ending is guessable well in advance. Nevertheless, Mr. Robinson (a top-flight American science-fiction magazine author) offers a tautly written suspense story which is more than a good "whodunit," for in the desperate hunt for the superman among the members of a U.S. Navy Committee for Human Research the ominous aspect of the misuse of paranormal powers is acutely observed. A good one for that evening when Poirot palls and straight science-fiction is stale.

Humourist Brian W. Aldiss (of *The Brightfount Diaries* fame—bless him!) has revealed in the past few years—as readers of *New Worlds* well know—a considerable and diversified talent

for the original and off-trail short story. No less than six of these from the pages of *New Worlds*, plus two from *Science Fantasy*, one each from *Nebula* and *Authentic*, together with his prize-winning *Observer* entry, and three others new to me, are now collected in **Space, Time and Nathaniel** (Faber & Faber, 12/6d). The effervescent Mr. Aldiss relies strongly on gimmicks and ideas bubbling with inventiveness, occasionally to the detriment of style. But not very often, because here is an unconventional style, both pleasing and thought-provoking, not always easy to read (happily unlike the standard fictional soporifics) but always stimulating and rewarding. The neat ingeniousness of "T," for instance, or the new slant on alien-human relations in "Our Kind of Knowledge," and the now classic "Psychlops" in which the spaceman telepaths his unborn son.

The sly dig jostles with ribaldry—as in "Conviction," "The Shubshub Race," "Supercity," and "Panel Game"—with an added deviltry reminiscent of John Collier. Try "Pogsmith" for some lighthearted interplanetary humour, or be agreeably chilled by "Not for an Age" or "Criminal Record." An occasional serious note intrudes in "There is a Tide" (a trifle self-conscious), "Outside" and "The Failed Men," and the book concludes with the sudden and bitter tenderness of "Dumb Show." An incredibly mixed bag from one author, with an odd and unconventional approach the only common factor, and considering that this collection contains most of his fantasy stories published to date, Mr. Aldiss' future seems very bright indeed.

By far the best science fiction novels slanted for the teen-age market in America have been the series of space-adventures by Robert Heinlein and Isaac Asimov (under his pseudonym, Paul French). This is not surprising since these top authors bring to their "juveniles" the same smoothness of style, deftness of

plot and characterisation evident in their other work. In these stories the hero, of course, is youthful, and they are usually innocent of sex, mayhem and grue but laced with plenty of elementary science. From experience, I know that their great appeal is not confined solely to younger readers. The English counterparts have been less successful, apart from Clarke's *Islands in the Sky* and, to a lesser degree, William Temple's series, but now a new (to me) author has come along with a very fine straight science fiction novel which will gladden the hearts of young and old. **Blast Off At Woomera** is by Hugh Walters (Faber & Faber, 12/6d) and although he bases his story on the unlikely possibility of a seventeen year old schoolboy being selected by the Government to man the first British outer space rocket (this, of course, ensures hero-identification among his younger readers) the circumstances are so very credibly detailed that this can be forgiven. Astronomers discover mysterious edifices on the Moon's surface but need photographs taken outside the Earth's atmosphere for clearer detail. The Research people at Woomera cannot build a larger rocket ship quickly enough, but the current model can be adapted to take a midget passenger. The Director of Research meets at his old school a diminutive but brilliant youngster, Chris Godfrey, who qualifies as candidate for this momentous task. There's not much more to it than this, but the author carefully leads the reader through all the preparations for the flight and the effect of the boy's character on his adult mentors, up to the achievement of the goal and the very thrilling climax. The style, understandably, is a little boys'-paperish at times, but I can recommend it as the ideal gift for that rocketry-minded young relative of yours who will be grateful enough to lend it to you afterwards (in the unlikely event of your having failed to read it first!).

Lastly a welcome surprise in the shape of a new novel from an old master of the "super-pseudoscientific" school, Murray

Leinster who, during his prolific output covering nearly thirty years and practically all of the magazines in the field, has occasionally produced a gem. **Operation : Outer Space** (Grayson & Grayson, 10/6d) is not up to his best standard—perhaps explaining why this is an original and not a reprint from a magazine—but is still a lively and slickly-written space-opera, redeemed by the characterisation, particularly of Jed Cochrane, the cynical “solidograph” producer of the future. He’s sent to do a public relations coverage on the latest invention of the boss’s scientist son-in-law on the Moon. As the device is for sending faster-than-light messages, it seems apparently useless, as nobody has reached the stars so there is no one to communicate with. However under high-pressure publicity build-up from Jed, the thing blows up into—interstellar travel ! Jed and his gang are on the first flight and their adventures provide the greatest show in the universe. Don’t take it seriously, just enjoy this light-hearted nonsense.

Leslie Flood

STILL AVAILABLE

But will be out of print soon



The first four
NOVA NOVELS

★ THEODORE STURGEON

The Dreaming Jewels

★ JAMES BLISH

Jack of Eagles

★ A. E. VAN VOGT

***The Weapon Shops of
Isher***

★ WILSON TUCKER

City In The Sea

ORDER FROM YOUR NEWSAGENT
OR DIRECT FROM THE PUBLISHERS



NOVA PUBLICATIONS

DERWENT HOUSE, 2, ARUNDEL STREET, LONDON, W.C.2.

Another famous Nova Magazine

Science Fantasy

128

PAGES

2/-

Bi-Monthly

presents in the current issue (No. 22)
two short novelettes together with
supporting short stories

It's Cold Outside

by RICHARD WILSON

This is a tense story of conflict between
a Utopian city state and the primitive
inhabitants in the Outside country regions.

The Black Crucible

by JOHN MANTLEY

The voyage of the *Pilgrim* to discover a
new homeland planet for the survivors
of a ravished earth.

Also short stories by :

★ ***John Wyndham***

★ ***Bertram Chandler***

★ ***E. D. Campbell***

★ ***and others***

ORDER FROM YOUR NEWSAGENT

NOVA PUBLICATIONS

DERWENT HOUSE, 2 ARUNDEL ST., LONDON, W.C.2.